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THE DISPENSARY AS A FACTOR IN MEDICAL EDUCATION AND AS A DIAGNOSTIC CLINIC*

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The main functions of the dispensary as an outpatient department of a general hospital which is part of a school of medicine are various, but in every aspect interlocking. They may be considered under four main headings as they are related primarily to (1) the hospital, (2) the school of medicine, (3) the medical profession and (4) the public.

THE HOSPITAL

1. In its relations to the hospital, the dispensary should be that department at which those many applicants for medical advice or attention who are not ill enough to enter the wards may be cared for.

2. It should be the center from which the patient who has been under observation in the wards may be followed and directed and observed through such periods of time as may be desirable.

3. It should be the center of an efficient social service department which should keep in touch with and assist the indigent sick who are under treatment in the dispensary, and their families and dependents.

THE SCHOOL OF MEDICINE

1. The dispensary is invaluable to the medical school as an arm through which there may be gathered patients suffering from those special diseases concerning which studies are in progress.

2. It affords, if properly organized, a mine of material in the shape of patients more or less disabled from chronic disease who may be utilized for purposes of instruction. And this utilization, in many instances, may be to the advantage of the patient himself. A consultation carried out in the presence of students—advice sympathetically and deliberately given before an audience with the explanation of its rationale, is often more impressive and effective than that given in private.

Again, wholly or partially disabled persons may, from time to time, earn small sums of money by allowing themselves to be presented as objects of demonstration or study.

3. The dispensary affords an opportunity for junior students acting as assistants to gain valuable training in the technic of history taking.

4. It offers an opportunity for the senior students of medicine to observe the attitude of his fellow man toward those lesser ailments with which he will be concerned in his daily practice. It offers the one opportunity, indeed, to study the reactions of the ambulant patient to advice. But the success of a physician depends largely on his ability to impress the ambulant patient or the healthy man of the necessity for those hygienic and preventive measures on which his health and efficiency may depend. And the mental attitude of the ambulant patient is very different from that of the disabled invalid in the wards.

5. The dispensary should be the center of a department of industrial medicine. There are many questions which not only relate directly to the health of employees, but also have wide medical, social and economic importance which may best be approached through our schools of medicine. The activities of several dispensaries, notably in Chicago, Cincinnati and Boston, are highly significant. It is important that students and practitioners of medicine should be kept in touch with the progress of information on these questions.

THE MEDICAL PROFESSION

In its relation to the medical profession (1) the dispensary offers relief to the overburdened practitioner in affording attention to those patients for whom, with all the charity and good will in the world, he cannot care, and at the same time do his duty to his other patients and to his own family. (2) It should offer to the practicing physician an opportunity from time to time to obtain for patients, otherwise unable to afford it, the benefit of special refined methods of diagnosis, and expert opinion.

THE PUBLIC

In its relation to the public (1) the dispensary should offer an opportunity for those unable to pay for medical attention to obtain that advice and care which the busy physician is unable to give. These patients pay for the care and advice which they obtain in two ways: First, by the time which they are obliged to give; for the conscientious handling of large bodies of individuals demands time, and a dispensary consultation is time taking to the patient. Secondly, and what is far more important, by the agreement that the consultation may be so carried out as to serve for the instruction of students of medicine, undergraduates or postgraduates.

2. Furthermore, the demand is steadily increasing that the properly organized dispensary should offer to physicians, and through them to the public, a clinic in which a thorough diagnostic investigation by competent physicians should be placed within the means of self-respecting and valuable citizens whose private resources

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prevent them from availing themselves of advice enjoyed by the rich and offered gratuitously to the poor.

These seem to me to be the main functions of the outpatient department of a teaching hospital.

VALUE OF DISPENSARY FROM STANDPOINT OF MEDICAL EDUCATION

Let us now consider a little more fully some of the several special aspects of the question as to the value of the dispensary from the standpoint of medical education. The objects of clinical instruction in general are: (1) the study of diagnosis, beginning with the teaching and application of methods of physical diagnosis, strictly speaking; (2) the study of the natural history of disease, and (3) the study of methods of therapy.

In a general way, the study of diagnosis is indissolubly involved with a study of the natural history of disease. The wards of a general hospital offer exceptional—indispensable—opportunities for the study of the anatomic and physiologic features of the natural history of disease, and of many of its important psychologic aspects, especially those associated with the graver maladies; they afford unequaled opportunities for the unraveling of difficult problems of differential diagnosis; they hold forth special facilities for the treatment of such diseases as may confine the patient to bed for shorter or longer periods of time or for such maladies as may require especially complicated measures of diet or treatment.

But the treatment of grave disease, the care of the patient who is confined to his bed, the unraveling of especially difficult diagnostic problems, the pursuit in ward and laboratory of scientific studies, pathologic, physiologic—these are not the main functions of the average physician. To recognize, to prevent, to protect, to heal—these are his main functions. To recognize the danger of disease, to instil into patients that understanding which may enable them so to order their lives that they may best preserve their health and efficiency, to detect the earliest stages of disease, to remove or combat these before it is too late—

Obsta principiis; sero medicina paratur. . . .

"Combat the ill at its source; too late is the medicine offered."

The instruction of the student in lectures, clinics and in the wards is, after all, rather one-sided. Inevitably the stress is laid on the graver phases of acute disease or on serious, established chronic affections. The hospital wards and clinics gather together in groups cases which the practitioner encounters but occasionally in his general practice, and afford an opportunity to demonstrate in a few months that which the student may meet thereafter only in years of experience.

The student sees a selected group of patients with grave maladies. These diseases are for the most part well established at the time he has occasion to observe them. He takes the history of the patients, he becomes familiar with their early symptoms, but when he leaves the hospital he has little idea of the relative frequency of these diseases, and little conception of the significance in the abstract, of the symptoms. Almost always the medical student beginning practice is puzzled by the absence in his patients of the evidence of those diseases which his experience up to that time has taught him are usually indicated by the symptoms of which they complain. He is puzzled and is very likely to alarm his patients and their families by an undue concern over manifestations, the relative importance of which he can learn only by experience. But in the dispensary, during his days in the medical school, a student has an admirable opportunity to familiarize himself with the anatomic, physiologic and psychologic aspects of the lesser ailments as well as of the earlier stages of grave diseases so important to recognize at the beginning.

An example of the attitude that the student acquires as a result of instruction in clinics and wards with selected cases of grave diseases is well illustrated by a phenomenon familiar to most teachers. The student takes the history of a patient who comes to the dispensary with the complaint of a cough. On questioning, he finds that there has been fever and sweating at night, considerable prostration and weakness, and a purulent expectoration—symptoms only too suggestive of pulmonary tuberculosis. The student examines his patient, who is fever-free and shows no physical signs of disease. He returns then to the instructor with a puzzled face, convinced that the man must have tuberculosis, and distrusts his examination. But on a little further questioning, it appears that the symptoms of fever and sweating at night, of prostration, of purulent expectoration, were of but a few days' duration; that for a week or two, perhaps, the patient has felt well; the fever has been absent; the expectoration has disappeared. It wasn't for these things that the patient came to the hospital. A healthy, normal man—these symptoms did not worry him. He knew that they meant a "bad cold." He came to the dispensary because he had begun to be worried that his cough still persisted; because his friends called his attention to it. This is a phenomenon perfectly familiar *in corpore vili* to every self-observant man. All that such a patient needs is reassurance, and in another ten days his cough will have gone.

Ability to recognize early tuberculosis of the lungs—one of the vitally important problems of practice—of the exanthems in their early stages cannot be acquired in clinics, in lectures or in wards of a hospital.

Properly to prevent and to protect, the physician must have human sympathy and skill in dealing with his fellow man. He must be familiar with the actions and reactions—not so particularly of the helpless invalid whom he can direct and control—but of the self-sufficient and independent man rushing along in his thoughtless career, who stops to ask for relief for a symptom but is impatient of warnings and knows not that he can fall. It is a fascinating and a difficult game that the physician must play. In the hospital the measures that need to be carried out he can, as it were, command; but without he can accomplish the necessary measures only by his own authority and through his powers of persuasion. On these powers depend largely his success as the protector, adviser and healer of his patients. But the mental attitude of the healthy, busily occupied man, suffering from a minor complaint, is far different from that of the invalid in the hospital ward. The greatest privilege, the most important and, at the same time, the most difficult duties of the physician—public and private—are these duties of prevention and protection: proper attention to lesser ailments, education of one's patients in matters of hygiene, proper care

of convalescence. And experience in these phases of practice is not to be gained in the wards.

Opportunities of this sort are valuable especially, not so much to the beginner as to the senior student.

It is remarkable and anomalous that so few of our schools of medicine should make use of the dispensary for the instruction of the senior student. This is a point on which I would especially insist. It is one which was keenly appreciated by my wise and valued friend Theodore Janeway, who in his clinic, at the time of his death, had devised an interesting scheme for the further utilization of the dispensary for the instruction of senior students. I am convinced that while the dispensary may be of assistance to the beginner in affording opportunities for the practice of taking histories, while it should supply special cases of chronic disease for study by small groups of students, while the material may be utilized with benefit for special "clinics," yet one of its greatest values in a school of medicine should lie in the fact that it constitutes a field in which the senior student may gain familiarity with that which constitutes the ordinary practice of medicine.

ADVANTAGES OF A GOOD CASE UNIT INDEX SYSTEM

At this point let me digress for a minute on a question which relates to hospital efficiency as well as to medical instruction. In order that the dispensary or the outpatient department of a teaching hospital should perform its proper function in any of its relations, it is necessary that there should be a good system of indexing the histories of the patients. Some of the good dispensaries in this country lose a large part of their value through defects in the filing and indexing of records. Statistical study is impossible if we cannot lay our hands upon the histories of our patients. The collection of patients for purposes of instruction is also impossible without proper indexing. I cannot too strongly emphasize the value of a unit system of hospital and dispensary histories. In the last thirty years I have undertaken a number of investigations which required a careful search through hospital records. No one, I fancy, who has not had considerable experience of this sort quite realizes the opportunities for error and the confusion and the waste of time caused by carelessness in inscribing the names of the patients alone. In one of the several institutions with which I have been connected, I had an occasion some years ago to tabulate about 2,000 case histories of a certain disease. These cases were summarized carefully on large sheets and numbered in order of the date of their entry. Many valuable hours were lost through the incredible complications depending on a lack of connection between dispensary and ward histories, the confusion arising chiefly from a careless transcription of names. In one instance a patient who had been treated through several years in the dispensary and who had had three admissions to the hospital appeared on various history sheets and books of the hospital under eleven different family names and five different first names—the extremes running from Stanislaus Niewierowsky to Mike Mokritzky. When outpatient department and hospital histories are separately filed, the complications that may arise are almost inconceivable.

In another series of cases, the histories, running into the hundreds, were classified according to the date of the patient's entrance into the hospital, but as they came mainly from one clinic, with their clinic number at the head of the line. Suddenly it was found that the carefully copied sheets summarizing the histories were thrown into complete confusion because, at a certain moment, one of the departments had decided to number the histories consecutively according to the date of discharge rather than according to the date of entry of the patient. It is easy to see that such ataxia and lack of cooperation render the tracing of patients extremely difficult and interfere seriously with the value of hospital records. If the dispensary is to be valuable as a place of instruction for students, it should have a well-organized index through which the entire history of the patient may be traced. A careful case unit index system, such as that now in use at the Presbyterian Hospital in New York, is invaluable, I might almost say indispensable.

In few of our dispensaries are the relations between the wards and outpatient department sufficiently close. Not only that we may properly serve the public, but for purposes of instruction, it is desirable that the dispensary should furnish the means for keeping up relations with patients discharged from the wards. Students too often see a patient at a clinic and hear nothing of his future course. To keep in touch properly with patients discharged from the wards is almost impossible in the absence of a unit case history system. But that the student should follow his case is extremely important. It ought to be possible for a student or a member of the staff at any time, by consulting the history of a given patient, to find a record of exactly what his progress has been in all his hospital relations.

The connection between the dispensary and the ward service should be so close that it ought to be possible for those members of the staff who are in charge of the wards to hold clinics from time to time for the special purpose of bringing together their old patients.

But in the short time that I am allowed, I have said perhaps all that I should with regard to the relations of the dispensary to medical instruction and I should like to recapitulate once more two or three points that seem to me of special importance. These are:

1. The value of the dispensary for the instruction of the senior medical student.

2. The value of the dispensary as an agency through which we may keep in touch with patients who have been treated in the wards.

3. The importance, indeed, the necessity, of a case unit index system, if the dispensary is to do its full duty to public or hospital or school of medicine.

4. The value of the dispensary as the center of a department of industrial medicine.

VALUE OF THE DISPENSARY AS A DIAGNOSTIC CLINIC

The value of the dispensary as a diagnostic clinic is a subject that has received a good deal of attention of late. Any outpatient department which is doing its full duty must, and, in many instances, does possess advantages in its laboratories and its equipment for an intensive study of various problems of diagnosis, beyond those possessed by the individual physician. One of the main objects of the dispensary is to bring together and to coordinate such means of study as to make it possible within the shortest period of time to make the most complete study of the individual case. Studies of this sort are made, of course, daily, outside the hospital, but, with the increasing complexities of

medicine, they have laid an increasing financial burden on the shoulders of the patient. Physicians who are making little above a living income frequently encounter cases in which desirable diagnostic studies can be obtained only at a cost prohibitive to the patient. Many a practitioner denies himself a considerable part of his own fee in order that such information may be obtained.

This information, these advantages, are open gratuitously to the poor in our better free dispensaries.

Among the more intelligent patients of moderate means, no small number seek, voluntarily, the advantages of a dispensary in order to obtain the diagnostic privileges afforded. It is, again, common in some hospitals to receive visits from patients who have come a considerable distance, sent often by physicians who seek the diagnostic help of the outpatient department.

More and more, I think, most observers interested in hospital development have come to feel that this function of the dispensary—its function in offering diagnostic assistance to the physician—is one which involves a real duty toward the physician and toward the public. There is nothing, it seems to me, in the character of the service demanded which should make this work of a so-called diagnostic clinic different from that which goes on in the dispensary every day in its regular routine. But it is fair to say that where such work is undertaken for a physician—and I believe that such work should be undertaken only at the request of the physician, and that in a good many instances the physician may well desire to be present—measures should be devised to make it less time-taking than the procedure of the regular dispensary service.

It is easy to see again that if entered upon on any large scale, such work might be very difficult to carry out. I believe, however, that it is fast becoming the duty of a well-organized outpatient department to make possible, preferably by appointment, a limited number, so many as is compatible with the organization of the institution, of consultations of this nature, and it is right and suitable that, when the patient can afford it, a moderate charge should be made. Such consultations will not be of great financial significance to the institution or to the members of the staff who take part in them, but they should be of great value to the institution in other ways. Every physician who has had a considerable consulting practice is aware of the extraordinarily interesting problems brought before him by his colleagues. From a scientific standpoint, then, such an arrangement should be of very real advantage. Not infrequently in the past, physicians have brought their patients to the dispensary at the Johns Hopkins Hospital at the hour of Dr. Osler's clinic, and his demonstration of the case to the class was equally valuable to patient, student and physician.

Secondly, from a standpoint of medical education, the opening of such opportunities should be useful. In connection with these consultations, senior students and postgraduate students would naturally be utilized as assistants in the taking of histories and in other ways; to them such an experience would be profitable.

I believe, then, that the advantages of the well-organized outpatient department should be opened, for a limited number of consultations at moderate rates, to physicians desiring to obtain such information with regard to patients unable to meet the ordinary expenses involved in such a procedure. This is a duty owed by the institution to the profession and to the public; and the procedure should be valuable to the hospital from a scientific standpoint—to the school of medicine as a means of instruction to senior and postgraduate students.

In connection with this, it may not be amiss to say a few words with regard to the so-called diagnostic clinics that have been arising in such numbers throughout the country in the last few years. These associations took their origin from the recognition by conscientious practitioners of the necessity of cooperation that they might, without too much expense and loss of time, obtain the expert advice desirable in the study of the patients. So far as these so-called clinics represent well organized groups of men of high professional ability who have associated themselves together for the purpose of making it possible for themselves individually better to study their cases, and with the desire, moreover, of affording at times the patient with moderate means such opportunities as the outpatient department of a hospital offers gratuitously to the poor, just so far are they tending to meet a real want and, on the other hand, to relieve the dispensary of these public responsibilities which do exist at the present moment.

The establishment, however, of such associations by other than well qualified men is very likely to and, I fear, sometimes does result in the patient's going through an unnecessary multiplicity of examinations and subjecting himself, in the end, to unnecessary expense which may more than offset the advantages offered to the few for whom so elaborate a study is really necessary.

A so-called diagnostic clinic to which a patient presents himself for a "thorough examination" in the sense, merely, that he passes through the mill, without primary consultation with some individual adviser, is an absurdity. Such organizations carry out on a large scale the sort of semicharlatanism with which we have been familiar for many years in some laboratories—those laboratories or physicians that furnish a certain sort of report on examinations of the urine, for instance—those unending reports with a meaningless list of impressive figures which the patient treasures and unfolds before us. These elaborate urinary reports have deceived many an unfortunate sufferer and led him to feel that he was getting something very important.

In like manner many a good man who can afford it, and others, alas, who cannot afford it, gain a certain satisfaction at considerable expense, in undergoing a large number of more or less useless examinations of which they receive an impressive written record. The term "diagnostic clinic" today unfortunately covers a multitude of sins. An association of physicians which offers special advantages for the investigation of every aspect of the case that may present itself to one of them, an association so organized as to make it possible that these studies may sometimes be open to those of limited means who might be unable otherwise to avail themselves of such assistance, is a blessing. A like association, on the other hand, which affords advantages for all sorts of special examinations, so advertises, and pursues these examinations in a routine manner, is a discredit to the profession and a danger rather than a benefit to the public.

For a group of physicians to advertise a "diagnostic clinic" is in as bad taste as for a physician to advertise himself. The physician's laboratories and assistants

and instruments of precision do not make his diagnoses; it is the physician himself who considers the case, seeks what information or assistance he may need, and uses his mind on the basis of his observation and this information. If the physician is not a man of judgment and wisdom and experience, the tests are worthless and often more than worthless—misleading.

For a group of physicians to advertise a "diagnostic clinic" is exactly analogous to that which an individual practitioner might do if he put an advertisement in the paper, saying, "Dr. X, Internist. All laboratory advantages. Associates in all specialties. Prepared to make a complete diagnostic study"—nothing more and nothing less. It is advertising; that is all. And there would seem to be no reason why a general hospital should advertise its dispensary any more than a private physician or group of physicians.

To advertise is not a crime; but the majority of conscientious physicians in this country believe that, on the whole, advertising does not help but misleads the public, for it opens wide the door to the unscrupulous. And the public is easily misled. Advertising is bad policy. Any advertisement that an honorable physician or a reputable hospital may make is sure to be outdone by the quack—and how is the public to know? Today the *intelligent* public does know that the reputable physician does not advertise.

"By their fruits, ye shall know them." It would be unfortunate if the medical profession of America, after so many years, were to lose confidence in these wise words.

CONCLUSION

Let me emphasize one further point: The well-organized dispensary should be a little more than a mere outpatient department. It should have a certain number of beds for purposes of diagnostic study and for the temporary accommodation of patients following minor operation or diagnostic procedures. This would clearly increase the efficiency of the outpatient department from every standpoint.

There are other aspects of the functions of the dispensary which might well be discussed, but I have occupied my full share of time. Let me express one more thought, however, and that is that the dispensary should in the future be a specially valuable center for postgraduate instruction. The demand for postgraduate instruction is increasing every day, and those physicians who present themselves at our large hospitals and schools of medicine seeking this instruction are far better qualified to profit by such experience than they were a few years ago. It is a duty of the well equipped hospital and school of medicine to offer such opportunities, and the advantages offered by a well ordered and equipped outpatient department for postgraduate teaching are closely analogous to those afforded for the teaching of senior students of medicine.

1208 Eutaw Place.

Chemical Changes in Blood in Nephritis.—In parenchymatous nephritis the nitrogen retention is comparatively small, although the examination of the blood generally discloses a retention of chlorids. The figures for urea nitrogen seldom exceed 30 mg., except in the terminal stages of the disease, and generally fall between this figure and 15. The figures for chlorids, expressed as sodium chloride, frequently exceed 0.6 per cent. for whole blood and 0.7 per cent. for plasma.—V. C. Myers, *Proc. New York Path. Soc.* **21:27** (Jan.-May) 1921.

THE USE OF THE OUTPATIENT DEPARTMENT AS A TEACHING FIELD FOR INTERNS

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In view of the steadily increasing attention to the outpatient department among hospitals and medical educators, it has seemed timely to collect and present a cross-section of opinion regarding the use of the outpatient department as a teaching field for interns, and the practice in representative hospitals throughout the United States. Dr. Osler[1] said, many years ago:

> Let me remind the younger physicians in the audience that some of the most brilliant reputations in the profession of this country have been built up upon the solid foundation of notes taken in outpatient departments. Let me urge you to make ample provision for your medical students in the outpatient department, where they see the patients in their native state, so to speak, before they have been scoured and cleansed by the nurses in the ward.

The "Essentials of an Acceptable Medical College," formulated by the Council on Medical Education and Hospitals of the American Medical Association, require that each medical school in order to be acceptable must control an outpatient department for teaching purposes. "The college should own or control a dispensary, or outpatient department, the attendance to be a daily average of 100 patients (visits) (for senior classes of 100 students or less), the patients to be carefully classified, good histories and records of the patients to be kept and the material to be well used. The attending staff should be made up of good teachers, should be well organized and be prompt and regular in attendance."

Of course, there are many factors which influence the value of the outpatient service as a teaching field. No doubt the most important is the character of supervision of the student. The mere turning loose of young medical students in a dispensary literally to "practice" on the patients is obviously of little or no educational value.

The type of clinical material varies in different communities, and for this reason some institutions are unable to provide a variety of training. The ratio of patients to students is another important factor, as time is an essential element for the thorough study of cases. The available equipment and laboratory facilities also greatly affect the educational opportunities for students.

REPLIES TO A QUESTIONNAIRE

As little information has been collected as to the present status of the education of interns in outpatient service, inquiry was made of the superintendents of 300 large hospitals throughout the United States, and of the deans of medical colleges, as to the use of interns in the outpatient departments of their institutions.

There were 162 replies received to this questionnaire. Of these answers, forty-four, or 27 per cent. (all but one from nonteaching institutions) stated that the hospital had no outpatient department. Two institutions which replied had a separate dispensary,

1. Osler, William: Functions of an Outpatient Department, Brit. M. J., June, 1908.

and four had no interns. Two deans who replied stated that their colleges provided only a two year medical course, and therefore their students were not prepared for outpatient service, and six of the replies received were duplicates, that is, the superintendent of a university hospital and the dean of the university both replied, giving data regarding the same hospital. This makes a total of fifty-eight institutions from

TABLE 1.—USE OF INTERNS IN THE OUTPATIENT DEPARTMENT (SUMMARY OF 104 REPLIES TO QUESTIONNAIRE)

	Replies from Nonteaching Institutions		Replies from Teaching Institutions		Total	
	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
Interns not used in outpatient department	11	19.3	4	8.5	15	14.4
Interns used only for emergency	5	8.8	..	...	5	4.8
Interns' work in outpatient department optional	7	12.3	10	21.3	17	16.4
Interns' work in outpatient department required	34	59.6	33	70.2	67	64.4
Total	57	100.0	47	100.0	104	100.0

which replies were received in which there was no possibility for the use of interns in an outpatient department.

Service of Interns in Outpatient Department.—Of the 104 other institutions, all had outpatient departments. In fifteen of these, interns were not used. In five, interns were used only for emergency. In seventeen, the service of the intern in the outpatient department was optional, and in sixty-seven the service of interns in the dispensary was required. Thus, in 64 per cent., or nearly two thirds of the institutions in which the use of interns was possible, their service in the outpatient department was required.

The proportions varied somewhat when the answers from the nonteaching hospitals were tabulated separately from those from teaching institutions (Table 1). In 70 per cent. of the teaching institutions the use of

TABLE 2.—CLINICS IN WHICH INTERNS ARE USED

Type of Clinic	No. of Institutions
All services	11
General medical	45
Surgical	27
Obstetric and prenatal	18
Eye, ear, nose and throat	18
Gynecology	15
Genito-urinary	15
Pediatric	10
Orthopedic	10
Neurology and psychiatry	7
Laboratory and roentgen ray	7
Dermatology	6
Contagious disease	2
Dental	2
Hernia	1
Metabolic	1
Industrial	1

the intern in the outpatient department was required, whereas this service was required in only 60 per cent. of the nonteaching hospitals; interns gave optional service in another 21 per cent. of the teaching institutions, so that service in the outpatient department was found to be either required or optional in more than nine tenths of the teaching institutions: a very interesting commentary on the value medical educators place on this service. In 12 per cent. of the nonteaching institutions, interns gave optional service; in 9 per cent. they were used only for emergency; in 19 per cent., nearly one fifth, they were not used in the outpatient department at all, an indication that the nonteaching institutions are not as alive to the educational opportunities of the outpatient department as are the teaching institutions.

Further tabulation was made of the replies from institutions in which outpatient service was required, of the types of clinics in which interns gave service, and of the term of service.

Type of Clinic in Which Interns Are Used.—In the sixty-seven institutions in which the service of interns in the outpatient department was required they were used in the clinics listed in Table 2. It will be seen that their use in medical clinics is much the most prevalent. This, of course, may be largely explained by the fact that this type of clinic is one of those most usually organized. But although surgical clinics are quite as common as medical, interns are not nearly so generally used in them. These answers would have been more illuminating if information as to what clinics were conducted had been available also.

Term of Service in the Outpatient Department.—The length of the term of service in the outpatient department in the institutions in which service is required is given below in Table 3. The fact that in nearly one quarter of these hospitals the term of service in the outpatient department "varies with the corresponding service in the wards" indicates that

TABLE 3.—LENGTH OF SERVICE

	Number of Institutions	Per Cent. of Institutions
Varying with ward service	16	23.9
Less than three months	10	14.9
Three months	14	20.9
From four to twelve months	8	11.9
One year and over	8	11.9
Not stated	11	16.4
Total	67	99.9

many institutions are making use of this opportunity of coordinating the training of the hospital wards with the experience in the dispensary. It is especially interesting to note that more than one tenth of the institutions required outpatient service of a year's duration or longer.

Advantages Taken of Outpatient Service When Optional.—Answers from deans and superintendents seemed to indicate that there is a wide difference in the way interns take advantage of outpatient service when this service is optional. Of those who answered this question, half stated that the interns rarely availed themselves of this privilege, and the other half that their interns were keenly interested in the outpatient service, or words to that effect.

In the questionnaire sent out, inquiry was made as to the advantages to be gained by both the hospital and the intern, by the use of the latter in the outpatient department; the difficulties in the use of interns in the dispensary, and the type of supervision given them there.

Advantages Gained by Intern Service in the Dispensary.—The answers to the question of the advantages to be gained by the institution indicate chiefly an appreciation on the part of the institution of the amount of work done by the intern, although the value of the intern as a liaison officer between the ward and outpatient department was also brought out. The chief advantage to be gained by the intern was thought

to be that he saw in the dispensary the type of case most likely to be encountered in later office practice. There was a rather general expression of the opinion that interns highly value outpatient service.

Supervision of Intern Work.—To the question, "How is the work of the intern in the outpatient department supervised by the medical staff?" eighteen replies stated that they were supervised "by the attending staff"; six that the chiefs of clinic or their assistants took care of supervision; five that the heads of departments were the overseers of dispensary work; in two dispensaries the interns were directly under the chief assistant, who was paid to assume charge of the dispensary; in four cases the interns were considered to be members of the staff pro tem. One letter stated naively that the interns were supervised by the staff when the members of the staff were present, and that the interns were in charge of the dispensary when the members of the staff were not present. Four letters stated that the supervision of the intern was "direct." In most cases the replies to this question were not sufficiently detailed to be very illuminating. It might be desirable to obtain further detailed information on this point. Unless there are certain physicians present during the outpatient hours whose primary duty is to instruct and supervise interns and students, rather than to give routine care to patients, there will always be a tendency for the urgent need of caring for the sick to take precedence of teaching. Both service to the patients and education of medical practitioners are important, and neither should be lost sight of in a properly organized teaching clinic.

REPRESENTATIVE NEW YORK PHYSICIANS FAVOR OUTPATIENT SERVICE

In the course of another investigation, one of us had the opportunity of conferring with seventy-five representative New York physicians who are active in outpatient work. These physicians were questioned as to their opinions regarding the use of interns in outpatient service. Of these physicians, 73 per cent. were in favor of the interns being used in the outpatient department under supervision. The chief reasons given by the physicians favoring outpatient service were that the intern had the opportunity of observing in the outpatient department the type of cases which would form the largest proportion of his office practice, and that there was a decided stimulus to the outpatient staff in having the younger men as students observing their work.

Twenty-seven per cent. of these physicians felt that the intern was too much occupied in the hospital to derive any real benefit from outpatient service without neglecting his hospital duties.

SHOULD OUTPATIENT SERVICE BE REQUIRED FOR HOSPITALS OFFERING ACCEPTABLE INTERNSHIPS?

As previously stated, the Council on Medical Education and Hospitals of the American Medical Association requires that medical schools, in order to be acceptable, must control an outpatient service; but the American Medical Association in its "Basis of Classification for Hospitals Offering an Acceptable Internship" does not make outpatient service for interns a requirement. The deans of medical schools were asked their opinion of adding such a requirement to the standards for acceptable hospitals. In answer to the question, "Do you believe that hospitals should offer outpatient experience to interns in order to be classified as offering an acceptable internship," forty replies were received. Eleven deans, more than one fourth, answered unequivocally "yes"; two typical answers are quoted:

DR. THEODORE HOUGH, University of Virginia: I decidedly favor requiring that hospitals should offer a rather extensive outpatient experience to interns in order to be classified as offering an acceptable internship. While the outpatient service should be used in the instruction of third and fourth year medical students, it is of peculiar value in the training of the intern. Briefly, the position is that the facilities of the outpatient department may be used in the case of the intern to give him experience in rapid diagnosis comparable to the office practice of a busy city physician. In a large outpatient clinic, I should roughly estimate that one third of the teaching facilities of the clinic should be used for the third and fourth year students, and two thirds for the interns.

PROF. FRANCIS G. BLAKE, Yale: This appears to be essential for the following reasons: First, if the work of the intern is only in the hospital ward, he is provided no opportunity to come in contact with or to study and treat ambulatory diseases, but sees only a group of conditions which are sufficiently severe to necessitate hospital treatment for the patient. It is quite obvious that he should have an opportunity to see and learn how to treat many of the minor ailments which he can see only in an outpatient department. This to me seems to be especially necessary because in private practice a considerable proportion of the patients who consult a physician are of this ambulatory class with only minor ailments. Second, outpatient service will also provide the intern an opportunity for seeing the earlier manifestations of many diseases, such as nephritis, heart disease and neurologic conditions, which he sees in the hospital only in the later stages. Third, the intern in the hospital ward has insufficient opportunity for learning how to prescribe drugs or to outline directly to the patient diets, mode of life, habits, exercise, etc.; work which he will have to do in considerable amount in private practice. The training afforded in this field in outpatient work should be of great help to him.

Another twenty-two, or more than one half of the deans who answered the letter, expressed as their opinion that, although the use of the outpatient department as a teaching field for the intern was extremely desirable, such service should not be made obligatory at the present time. Typical answers were:

DR. C. N. MEADER, University of Colorado: There are many hospitals which do at present, or can with a little strengthening in a few places, offer very acceptable internships but which do not now conduct an outpatient department. To attempt to force these hospitals to develop an outpatient department hastily and at the present time might seriously handicap the efficiency of other work in the hospital and result in making the total internship less rather than more desirable.

DR. J. T. HALSEY, Tulane University of Louisiana: Though we do not believe that in order to be classified as offering an acceptable internship it is necessary that a hospital should offer outpatient experience to interns, we do believe that, other things being equal, hospitals offering outpatient experience to its interns offer a more acceptable internship than those which do not.

DR. WILLIAM DARRACH, Columbia University: We believe that hospitals should offer outpatient experience to interns, but do not believe that this should be a necessary qualification for hospitals to be classified as offering an acceptable internship. Such a service should be of great advantage to the interns, but I do not believe the time is yet ripe when it should be made a necessity.

DR. R. V. PATTERSON, Jefferson Medical College of Philadelphia: It would not seem to me desirable to make intern service in the outpatient department compulsory. The experi-

ence is undoubtedly valuable, and in some institutions might be made a part of the regular service. I deplore, however, a too minute specification of resident service which would not allow sufficient latitude to individual institutions with the variability of their services.

One letter suggested that hospitals offering a two years' or eighteen months' internship should be required to offer outpatient service, but that institutions giving only one year's service should not be required to do so. Another answer brought out the fact that institutions in some parts of the country cannot provide outpatient clinical material because of the size or character of the population of their communities.

Of the forty deans answering this question, only five, or one eighth, stated definitely as their opinion that outpatient service should not be required of hospitals offering acceptable internships, without some such qualifying statements as those quoted above. One made the point that as soon as intern service is universally required for medical licensure, outpatient service should be required of interns.

The preponderance of opinion in favor of the use of the outpatient department as a teaching field for interns is shown by the forty-three answers to the question, "In your opinion should there be experience in the outpatient department during the intern year?" Thirty-seven, or 86 per cent., of the deans answered this question in the affirmative, while two stated that such service was "desirable but not necessary." Only four, or 9 per cent., considered intern service in the outpatient department undesirable.

CONTINUANCE OF OUTPATIENT SERVICE OVER THIRD, FOURTH AND INTERN YEAR

Previous inquiries had brought out some divergence of opinion as to the time when outpatient experience was most valuable to medical students, that is, whether such experience should precede the intern year or be simultaneous or continue during both periods. Consequently, the deans of medical schools were further questioned regarding this matter.

Their answers to the question, "In your opinion should there be experience in the outpatient department during the third year, or in both the third and fourth years of the undergraduate course?" were fairly uniform. Thirty-seven, or 86 per cent., of the deans answered that there should be outpatient experience in both the third and fourth years; four, or 9 per cent., that such experience should be in the fourth year only; one that there should be outpatient experience "probably in the third year and surely in the fourth"; and one that the third year experience should include only laboratory service. Four letters stated, further, that the third year service should be in general medicine and surgery, and that the fourth year service should be devoted to specialties.

Thirty-six of the forty-three answers, or 84 per cent., stated that there should be outpatient experience during both the undergraduate and the graduate period, if this could be arranged. Several answers expressed the opinion that, if undergraduate experience had been thorough, the service during the intern year was not so necessary. For example:

DR. G. W. KOBER, Georgetown University: If this undergraduate course is thorough, the need for interns in outpatient experience, although desirable, is less urgent.

Several other deans believed that outpatient service should be shifted from the third year to the intern year. As one[2] says:

I cannot escape the conviction that the outpatient clinic would render far greater service in medical training if the greater part of this work came in the second half of the fourth year or, still better, were part of the intern year. In a large clinic a relatively small amount of time can be given to each patient, for all patients who come must be attended to during dispensary hours. It corresponds to the office practice of a busy physician, and the physician must work rapidly. This is the very thing the third year student cannot do. The intern or the fourth year student, on the other hand, would profit greatly by this experience.

The same view was expressed in a discussion[3] on the "Training of the Student in Medicine" in Edinburgh in 1918:

The clinique should be restricted to senior students. . . . In our view, attendance at outpatient cliniques is not for the student who is still unfamiliar with the ordinary physical signs of disease.

The preponderance of opinion was that experience during the graduate or fifth year was being considered more and more important:

DR. W. S. BORDEN, George Washington University: In my opinion, outpatient experience during both the undergraduate and the intern period is most advisable. It is necessary in the undergraduate period in order to give students knowledge of ambulatory cases, without which they could become clinically acquainted only with bed cases. During the intern year, it is advisable for the reason that without outpatient experience a very valuable year or years would be devoted to seeing only such patients as are in the hospital.

DR. JOHN M. DODSON, Rush Medical College: I think it might be of advantage when a medical school has entire control both of an outpatient department and of a hospital to arrange the work so that undergraduates would receive training in the wards and do work which would relieve the intern of some of his duties, thus giving the intern opportunity for some advanced type of work in the outpatient department. This could be operative only in the case of those interns serving in hospitals under the immediate control of the college. An arrangement whereby both the third and the fourth year students and the interns secure some experience in both the outpatient department and in the wards affords the best type of training.

SHOULD OUTPATIENT SERVICE BE DEFERRED UNTIL AFTER INTERNSHIP IS COMPLETED?

In the letters from medical educators, this question was not raised, but in the conferences with representative New York physicians, the point was often made that outpatient service might to advantage follow hospital internship. In actual practice, when young physicians locate in an urban community, they usually do affiliate with a hospital by becoming clinical assistants in an outpatient department. But, obviously, for the young men locating in smaller communities, such postgraduate service is not possible. Furthermore, such a system could allow the young graduate to commence office practice without the experience best suited to prepare him for it. As a graduate physician serving in the outpatient department, he might also be given complete responsibility, which he would be scarcely capable of assuming unless he had had previous experience as a student under supervision.

2. Hough, Theodore: The Proper Location of the State-Supported Medical School in Virginia.
3. Matthew, Edwin: The Teaching of Medicine, Edinburgh M. J. 21:24 (July) 1918.

SUMMARY AND CONCLUSIONS

The opinion of medical educators and hospital administrators, as outlined above, is decidedly in favor of the use of the outpatient department as a teaching field for fifth-year medical students. Recognition of the value of dispensary experience is evidenced by the present practice of requiring intern service in the outpatient department in a very large proportion of both teaching and nonteaching institutions.

There are, however, objections to the requirement of outpatient service from a hospital in order to provide an acceptable internship, the chief of which is that, because of the character and size of the population in the district served by some hospitals, it would be difficult or impossible for them to build up a successful outpatient service. To require outpatient service would work a decided hardship on such institutions. In any case, it would not be desirable to require hospitals to develop outpatient departments too rapidly. For these reasons it does not seem advisable to suggest that the standards of the American Medical Association be changed at this time.

But there is such a decided tendency to require the fifth or intern year before the granting of the medical degree [4] or state licensure [5] that very careful consideration and control of the educational opportunities in this year are essential. In improving the educational advantages offered fifth year students in hospitals, outpatient service must not be lost sight of. Would it be desirable for the Council on Medical Education and Hospitals to state that, after a certain period of years, outpatient service would be required of hospitals offering acceptable internships, and in the interval to allow an institution to substitute an acceptable outpatient service for other weak spots in the hospital service? For example, Dr. Baldy, the commissioner of public welfare of Pennsylvania, says that:

> In a few of the institutions in which an excellent surgical service is given but only a moderate medical service, we have arranged with the authorities so to improve and utilize for intern education the dispensary service as to supplement the medical service and thereby make it sufficient to pass muster on the medical side of the education of the intern.

It may also be necessary to inquire into the need for lengthening the intern service in order to make possible the additional time to be spent in the outpatient department. It is thought, however, that time now devoted by interns to noneducational duties might well be diverted to outpatient service without lengthening the time of service. The fact that such a large proportion of teaching institutions now require outpatient department service from interns indicates that such service is not incompatible with their other duties. The educational value of ward service to the intern is unquestioned; both indoor and outpatient experience are essential. The question is one of relative values. Is not dispensary service of sufficient intrinsic importance to require a share of time during a well-rounded internship?

The problem of the intern in the outpatient department raises questions which are similar in many respects to those which affect the use of pupil nurses in this department. The nurse, like the intern, is in danger of having her work confined to that which may be helpful to the wards or the outpatient department, but which is not profitable from the educational standpoint. The subject of nursing service in the outpatient department has recently been studied by the National Committee on Public Health Nursing Education, of which Miss Josephine Goldmark is secretary, and the report of this committee, which it is expected will appear in the near future, should shed light, not only on the details of the nursing problem in the outpatient department, but also on the principles which should govern the use of medical, nursing or other professional students in connection with any phase of hospital activity.

It is obvious that there is a strong trend of influence among medical educators and leading hospital officials in the direction of greater use of the outpatient department as a teaching field for the intern. It is also obvious that the method whereby the outpatient department can best be employed as an educational field for the intern, the manner in which the intern should be supervised, and other questions, are as yet subjects for study and experiment, rather than matters on which accepted standards have already been reached. In the formulation of standards of medical education in the future, greater attention should be given by hospital organizations, by committees of the medical societies, and by the state licensing boards to the subject of outpatient service and its relation to medical education, to the training of interns, and to the standards of hospitals.

15 West Forty-Third Street.

4. Nine schools have adopted the intern year as a requirement for the M.D. degree: University of Minnesota Medical School, Stanford University School of Medicine, Rush Medical College (University of Chicago), University of California Medical School, Northwestern University Medical School, University of Vermont College of Medicine, University of Illinois College of Medicine, Loyola University School of Medicine, and Detroit College of Medicine and Surgery.

5. The licensing boards in ten states require internship as an essential qualification for medical licensure: Pennsylvania, New Jersey, Alaska, Rhode Island, North Dakota, Washington, Illinois, Michigan, Iowa and Texas.

THE PRESENT STATUS OF OBSERVATION AS A CLINICAL ART

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There are few stories more fascinating than that unfolded in the history of medicine, and it is to be regretted, for many reasons, that some consideration of it does not form a more prominent part of the present-day medical curriculum.

It is of particular interest to observe the gradual evolution of teaching methods in medicine, and it is of great value to consider whether, perhaps, in the effort to supply in a relatively short time a working knowledge and competent understanding of the varied and complex minutiae which constitute the theory and practice of the medical art of today, we are not in danger of losing sight of some of the basic principles on which the teachings of the pioneers were founded and to which, indirectly, we owe much of the advance made in the present.

Of all the arts, undoubtedly, few have made greater advances in the same period of time than medicine in the last century. In fact, so rapid, so extensive and so profound have been the additions to our knowledge in some fields that only by persistent, studious effort can the man who secured his diploma within a score of years keep pace with the forward march.

The medical student of today, were he to pause to consider it, would doubtless look with envy on the disciples of Esculapius, of Hippocrates, of Galen and their contemporaries, picturing their journey along the road to knowledge as a pleasant stroll, indeed, compared to the harried and hurried rush along the path laid out for *his* footsteps.

The contemplator of their methods cannot fail to note that, perforce, all of their knowledge rested mainly on a close and keen observation of the patient and the various phenomena manifested in his condition from which various inferences and deductions, often unbelievably shrewd, were drawn.

Stripped to its essentials, the problem presented by any given case has always been the same from their day to ours; for it is an obvious and admitted fact that the intelligent treatment of any condition necessitates, first of all, a correct diagnosis; and practically all of the efforts expended in the study of a particular case are primarily directed toward the formation of a diagnosis as a working premise from which an intelligent plan of attack, as it were, can be formulated.

In the ancient days great dependence was, of necessity, placed on those things apparent to the naked eye, in a word, on the appearance of the patient and the obvious variations from the normal produced by the phenomena of his disease. Following this, in the light of past experience and the accumulated data of previous observers, came deductions as to the cause of the condition and the most favorable means of combating it, their accuracy and success depending on the keenness and intelligence of the observer.

It is natural, in the light of our present knowledge, that many of the conclusions then formulated appear ludicrous to modern eyes; but it must not be overlooked that many of the signs and symptoms then noted and described are still living entities in medical terminology —an evidence of the keenness of early observations. Moreover, to the vivid, graphic and masterly descriptions of various conditions, modern medicine has added only the discovery of the cause, and, in not a few instances, the starting point of etiologic investigations has been more or less definitely indicated by the minute details as to the distribution, seasonal incidence, and various other factors recorded by the observers of other days.

The principle on which the practice of former days rested might be said to have been, not merely the study of the disease, but rather the study of the patient as he personified the disease in question.

There are times when it would seem that the practice of modern ages would seem to be different.

If the resident physicians of today are to be—as they must—the teachers of tomorrow, and if, as perforce they do, they represent the end-result of the present-day methods of teaching, it is a matter of profound interest—and, at times, of some concern—to observe their manner of use of what they have been taught.

There is often to be noted a marked and marvelous familiarity with all the ultrascientific advances; varied and awe-inspiring are the methods of examination called into play: chemical, bacteriologic, biochemical, roentgenologic, psychanalytic and immunologic; painstakingly the "case"—the word is used advisedly—is divided into zones and sectors, and the presiding deity of each—the specialist—forthwith sent for. Laboratories of all kinds hum with activity; the blood, urine, feces, basal metabolism and blood cholesterol all are minutely examined and graphed; a snowstorm of reports rapidly falls on the chart, on which the diagnosis is, at times, ultimately to depend—and amid all this bustle one often looks in vain for some study of the patient as individual, for some realization of the fact that there are grounds for maintaining that the patient should be considered as a whole, as a complex mechanism of interlocking parts which cannot thus be ruthlessly torn asunder.

In view of this fact, it would seem timely to consider whether the importance and essential necessity of a careful observation of the patient as an individual has not been at least partially lost sight of, and whether, if some emphasis is not laid on this fact, the art of clinical observation is not in some danger of falling into decadence.

The candid observer must admit that realization of these all-important truths is not always evidenced by the residents of today, the product of the teaching methods of today.

When confronted with a possible fracture, how often is a perfunctory examination merely the precursor of a roentgenogram which makes the diagnosis instead of being the means of corroborating conclusions based on observation and the sense of touch?

Which is the more frequent procedure when confronted with an admission to the medical wards after the chief complaint has been elicited: an immediate percussion or auscultation of the chest, or a careful, keen observation of the patient, of his general appearance, his attitude, expression and posture; of the patient's chest as a part of the patient, to be followed by the stethoscope and pleximeter?

How frequently and with what care are irrelevant minutiae as to the cause of Aunt Mary's death and other features of the family tribulations spread at length on the history, while the salient and significant features of the patient's illness are lost sight of; how many "leads," indicated, perhaps, only by apparently inconsequential details, are entirely overlooked and neglected?

A correct diagnosis is, of course, a sine qua non toward which we all strive, and it should be obvious that it rests firmly and absolutely on a careful observation of the patient and an intelligent correlation of all the findings as a whole, elicited by whatever method.

Diagnosis, in brief, is merely observation plus recollection. Observation of certain phenomena manifested in the patient and elicited by his history and examination—by whatever means—and the intelligent association of these facts with the recollection that similar phenomena occur in certain conditions. As an old saying has it, "One sees only what one knows."

The keen observer who makes a habit of seeing intelligently and of correlating his observations with others in the storehouse of his memory will inevitably outstrip his colleague who relies on laboratory reports alone. There is no more valuable habit than that of observation, and none more easily acquired by constant practice. The more one trains oneself to observe, the more the attention will be attracted by variations from the normal, and by making practical use of such experience one gradually and steadily learns to observe more sharply.

But it must always be remembered that merely to observe is not enough. What is seen must be correlated and coordinated with what has been seen before, for "the perfection of observation really depends upon knowledge." As the Chinese philosopher put it: "Study without thought is vain; thought without study

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is dangerous. . . . To know what we know and know what we do not know—that is understanding."

It cannot be said that the apparent trend toward neglect of clinical observation is entirely a modern evil. Bacon observes that "physicians are some of them so pleasing and conformable to the humor of the patient as they possess not the true cure of the disease; and some other are so regular in proceeding according to the art for the disease as they respect not sufficiently the condition of the patient."

Observation of the patient, then, should be the very first step in the study of him: observation of him, first as a whole: his facies, his attitude, his manner of action, of speech, and the like; and to the practical observer much information will accrue, often of diagnostic information per se, and frequently of great suggestive value as indicating various possibilities to consider.

Then comes observation of the patient as to his parts, as it were: the examination or observation of the various portions and mechanisms of his body by the various means and methods available—clinical and laboratory—and, finally, their interpretation in terms of the patient as a whole and the correlation of this completed study with what is recalled of other similar studies by whomsoever made: observation plus recollection equals diagnosis.

It cannot be maintained, of course, that this regimen has fallen into disuse, but it can safely be said that certain portions of it would seem, at least, to be in grave danger of falling into abeyance.

No one can belittle the achievements of the laboratory in the development of modern medicine, for much of the advance has had either its initiation or its completion in the laboratory; but it can be asked with some justice whether or not the present trend of study has not centered upon studies in the laboratory to the detriment of study of the patient. It would be a fruitful and enlightening field of speculation, for example, to inquire in how many cases in which a Wassermann test is asked for an equally careful history and physical examination as to the possibility of syphilis had been completed; or to ascertain the number of tuberculosis cases in which the diagnosis waits upon the sputum report.

It seems trite to say that a diagnosis is—or should be—a sum total of the history, the findings in the patient, and the results of various specialized methods of examination; and yet one is at times compelled to wonder whether this is being sufficiently emphasized.

It is not the examination or the test that counts as much as it is the interpretation that is of significance. As Aristotle says: "Ubi desinit philosophus, ibi incipit medicus" (where the philosopher leaves off, there the physician begins).

Though he wrote on a foreign subject, the principle which this paper has attempted to express is beautifully illustrated by Edwin Burke in his preface to the Essay on Taste: "In considering any complex matter"—and what is more complex than the human mechanism and the "ills that flesh is heir to"—"we ought to examine every distinct ingredient in the composition one by one and reduce everything to the utmost simplicity. . . . The greater the number of comparisons we make, the more general and the more certain our knowledge is likely to prove as built upon a more extensive and perfect induction. If an inquiry thus carefully conducted should fail at last of discovering the truth, it may answer an end as useful in discovering to us the weakness of our own understanding. If it does not make us knowing, it may make us modest. If it does not preserve us from error, it may, at least, from the spirit of error."

EXPERIMENTAL STUDIES WITH PROPRIETARY VITAMIN PRODUCTS*

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The greater attention given to the deficiency diseases by the medical profession during recent years is in large part due to our increasing knowledge of these diseases and to the excellent investigations with their productive results which have been finished during the last few years. The interest of the profession has been aroused, and that of the laity more keenly stimulated, by the widespread advertising in the daily press and magazines and through the glaring claims made by the manufacturers of some of the so-called vitamin-containing products.

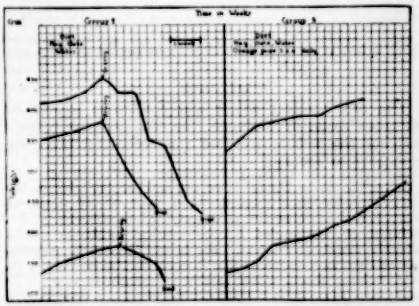

Chart 1.—Group 1: Guinea-pigs fed hay, oats and water developed scurvy on an average of from two to three weeks after beginning the diet; unless the diet was changed, they died between one and three weeks after scurvy was diagnosed. Group 3: Guinea-pigs fed hay, oats, water and 5 c.c. of orange juice daily gained rapidly and were well at the end of two months.

Because of the widespread publicity given the so-called concentrated vitamin products, we deemed it of sufficient interest and importance, for both profession and laity, to make a study of some of these products to ascertain, if possible, whether or not the claims made for them were well-founded.

ANTISCORBUTIC STUDIES

It has been demonstrated that some of the vitamins can be concentrated and dry preparations made without much loss of their protective properties. Studies by Alfred F. Hess, which have been confirmed by our own experiments, have definitely shown that when fresh cow's milk, high in antiscorbutic value, is dried in a few seconds at a temperature of 110 C. and kept in hermetically sealed containers, little of its antiscorbutic property is lost. Orange juice dried under similar con-

* Read before the American Pediatric Society, May 1, 1922, Washington, D. C.

* From the Departments of Pediatrics and Pathology, University of Illinois College of Medicine.

ditions retains the greater part of its antiscorbutic properties for a limited time. All investigators have similarly concluded that aging and oxidation of dried products made from fresh foods causes deterioration of the antiscorbutic value. Since the water soluble C vitamin has been proved the least stable of the three definitely known vitamins, we feel that tests which prove this vitamin to be still present in the dried product give a fair indication that the other vitamins have not been completely destroyed.

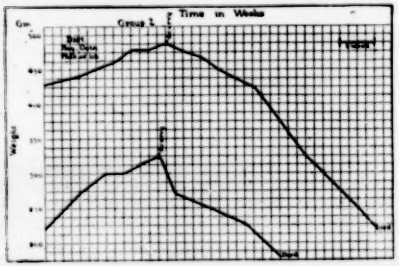

Chart 2 (Group 2).—Guinea-pigs fed hay, oats and milk developed scurvy in from two to five weeks, and died from three to six weeks later.

METAGEN

The first product which was studied is known by the trade name of Metagen. In the literature accompanying the article we find the following referring especially to scurvy:

> Under the name Metagen we are making available to the medical profession a preparation of concentrated vitamines in a convenient form for therapeutic administration. . . . Metagen is commended to the medical profession as a valuable therapeutic agent. Biological tests with pigeons, rats and guinea-pigs show that it contains the fat soluble A, water soluble B and water soluble C vitamines. . . . To summarize, then, these therapeutic indications, it may be said that Metagen, which contains the water soluble and fat soluble vitamines, can be used for its direct action in deficiency diseases—beriberi, scurvy, marasmus and malnutrition.

Our first studies were made to test out the potency of this product in regard to the antiscorbutic vitamin. Guinea-pigs, when fed a scurvy-producing diet, will usually develop the disease in from two to three weeks. Metagen was used as an accessory food in conjunction with scurvy-producing diets in a series of guinea-pig experiments.

The literature on this commercial product further recommends that:

> The usual dose of Metagen for an infant is half the contents of a five-grain capsule, mixed with a small quantity of water, which is repeated two to four times daily, between feedings. In the cases of older children, three to ten years of age, one capsule should be given three times daily before meals.

We were unable to find anything regarding the dosage necessary to protect guinea-pigs from getting scurvy, and had to make an arbitrary dosage for the animals. Since the manufacturers' literature states that a baby can be protected by 10 grains a day, we considered that, if a guinea-pig were given twice the dose recommended for an infant, the results of the experiment would be fair to the product. In comparing guinea-pig with infant requirements, Alfred F. Hess found that the former requires about one-fifth to one-third the amount needed by infants, or that 3 c.c. of orange juice a day will protect a guinea-pig from scurvy and, roughly, 10 c.c. would protect a baby.

Guinea-pigs ranging from 120 to 500 gm. were used.

Group 1 was fed a standard scurvy-producing diet of oats, hay and water.

Group 2 was fed oats, hay and milk[1] ad libitum.

Group 3 was fed oats, hay and water, plus 20 grains of Metagen.

Group 4 was fed oats, hay and milk ad libitum plus 20 grains of Metagen.

Group 5 was fed oats, hay, and water or milk, and 5 c.c. of orange juice, as a control.

The Metagen was purchased on the open market. In this way we were assured of a product similar to that which would be purchased by patients for whom it might have been prescribed. For feeding purposes it was suspended in from 3 to 5 c.c. of milk and fed to the guinea-pigs with a medicine dropper as soon as possible after mixing. While some difficulty was experienced with its administration during the first two or three feedings, the guinea-pigs soon yielded to this method of feeding and took it with avidity.[2] By this method of administration we were assured that the animals in Groups 3 and 4 received the 20 grains of material daily. The 5 c.c. of orange juice given to the controls was fed in a similar manner.

RESULTS

Group 1, the animals fed on oats, hay and water, developed scurvy on an average of from two to three weeks after commencing the diet, and, unless the diet was altered, died between one and three weeks after scurvy was diagnosed.

Group 2, receiving oats, hay and milk, developed scurvy in from two to five weeks, and died in from three to six weeks unless orange juice was given.

Group 3, receiving oats, hay and water, plus 20 grains of Metagen, in every instance developed scurvy in from two to four weeks, and died of scurvy a few weeks later, unless protected by the addition of orange juice to their diet.

Group 4, receiving oats, hay and milk and 20 grains of Metagen, all developed scurvy in from two to four weeks. The scurvy progressed to a fatal termination in all animals unprotected by the addition of orange juice to the diet in from three to six weeks.

Group 5, receiving oats, hay, and water or milk, and 5 c.c. of orange juice a day, gained rapidly, and all the animals were well at the end of two months.

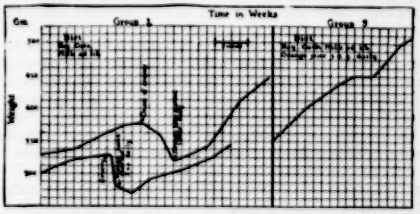

Chart 3.—Group 2: Guinea-pigs fed hay, oats and milk developed scurvy in from two to five weeks, and recovered on the addition of orange juice to the diet. Group 5: Guinea-pigs fed hay, oats, milk and 5 c.c. of orange juice daily gained rapidly, and were well at the end of two months.

Characteristic of all our groups was an early and seemingly normal gain in weight up to a few days before the

1. The milk used was a commercial pasteurized milk. It was not reheated. Similar milk has been found by one of us to be deficient in the water soluble C vitamin.

2. One of us raised the question as to whether the forced medicine dropper feedings might not have led to a decreased appetite and thereby, through insufficient food intake, have precipitated the scurvy. To rule out this possibility, a number of pigs had their Metagen dropper feedings continued after the addition of orange juice to their diet, which was otherwise unchanged. In these the improvement proceeded with rapidity equal to that in those in which the dropper feedings were stopped, thereby excluding loss of appetite as a direct factor.

clinical signs of hemorrhages and joint changes could be demonstrated. The prodromal symptoms consisted of loss of appetite, apathy and evidence of pain on handling. After the appearance of the hemorrhages, there was a persistent loss in weight and increasing listlessness until death.

To demonstrate the value of adding a fresh antiscorbutic to the diet of our Metagen-fed animals, orange juice was added, after the scurvy had been diagnosed clinically, from three to nine days, depending on the severity of the symptoms. With few exceptions the animals made complete recovery. In those which were left on the original diet for

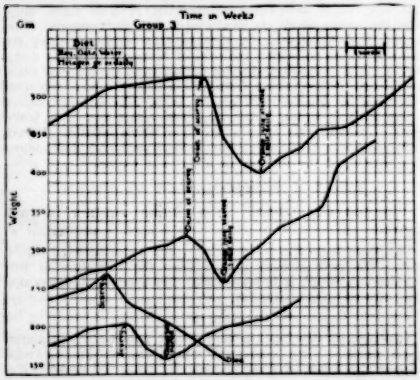

Chart 4 (Group 3).—Guinea-pigs fed hay, oats, water and Metagen, 20 grains daily, developed scurvy in from two to four weeks, and died of scurvy a few weeks later unless protected by the addition of orange juice to the diet.

longer periods after the disease had developed, the recovery was slower, and in some extreme cases the disease proved fatal.

CONCLUSIONS

The foregoing experiments show that Metagen as obtained on the open market contains no demonstrable amount of antiscorbutic substances, as shown by experiments on the guinea-pigs. The effect of the aging of this product after leaving the manufacturing laboratory may be of importance.

VITAMON

The second product studied is known commercially as Vitamon. Quoting from the literature on this product, in its relation to scurvy:

Mastin's Vitamon Tablets contain not only yeast vitamines but all three of the precious vitamines—A, B and C, especially concentrated and combined with other valuable health-giving elements which your system needs to keep you strong and well.

No matter what tonics or preparations you may have tried in the past or how hopeless you are of ever becoming alert, healthy, properly developed and physically fit—with strong nerves, a keen active mind, a clear skin and generally improved appearance—you will find it well worth your while to make this simple test:

First weigh yourself and measure yourself. Next, take Mastin's Vitamon—two tablets with every meal. Then weigh and measure yourself again each week and continue taking Mastin's Vitamon Tablets regularly until you are satisfied with your gain in weight, "pep," energy and improved appearance. It is not only a question of how much better you look and feel or what your friends say and think—the scales and tape measure will tell their own story.

A series of experiments was made with groups fed on diets similar to those used in the foregoing experiments.

In the case of Groups 3 and 4, four tablets a day, or two thirds of that recommended for adult use, were fed to each guinea-pig.

RESULTS

The animals fed a scurvy-producing diet, plus the Vitamon, without exception developed scurvy in from fourteen to sixteen days.

PRODUCT CONTAINING DRIED ORANGE JUICE AND DESICCATED PIG'S LIVER

A third product now in the process of experimental preparation which contained dried orange juice and desiccated pig's liver was investigated at the manufacturer's request.

Only three guinea-pigs were studied with this product. The first was given 1 gm. daily, added to oats, hay and water diet, and developed scurvy within fourteen days, at which time the food was increased to 5 gm. daily. The animal died four weeks later in a very emaciated condition. The necropsy revealed typical scurvy lesions. The second animal on the same diet, with from 2 to 3 gm. of this product daily, died within seven days before any lesions of scurvy had time to develop. The necropsy revealed distended intestines filled with fluid feces. Congestion of the lungs was also present, but no apparent scurvy. The third animal received 5 gm. daily and died on the seventh day. The necropsy revealed similar findings.

All of the animals on the larger doses of this product developed diarrhea, lost weight rapidly, and finally died. It was our impression that this was due to a toxic effect of the product. It should be stated that the use of this product was started within two weeks after its receipt from the manufacturer.

CONCLUSIONS

The three products investigated were found to contain insufficient antiscorbutic vitamins to protect guinea-pigs from scurvy, when administered in quantities recommended as protecting doses for infants or children.

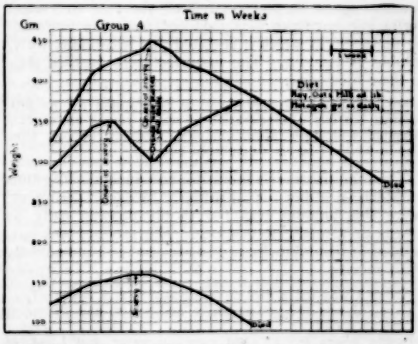

Chart 5 (Group 4).—Guinea-pigs fed hay, oats, milk and Metagen, 20 grains daily, developed scurvy in from two to four weeks, and died from three to six weeks later unless protected by the addition of orange juice to the diet.

STUDIES ON THE ANTINEURITIC VITAMIN, OR WATER SOLUBLE B

Fowl experiments were made with the concentrated commercial preparations for their antineuritic potency. It has been claimed that the water soluble B vitamin is considerably more stable and resistant to the action of heating, drying and aging than the water soluble C (antiscorbutic). This fact was considered with great interest in our further studies, in view of our conclu-

sions that aging, more especially, may have been responsible to a large degree for the minimum content, in water soluble C, of some of the commercial products used in our guinea-pig experiments.

In testing for this vitamin, pigeons were used. These birds when fed a diet of polished rice and water, ad libitum, will ordinarily develop avian polyneuritis (beriberi) in from three to four weeks. The addition of small quantities of the water soluble B to the diet will prevent the development of this disease.

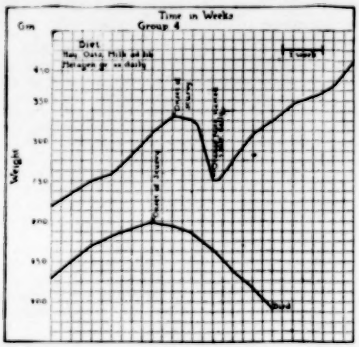

Chart 6 (Group 4).—Guinea-pigs fed hay, oats, milk and Metagen, 20 grains daily, developed scurvy in from two to four weeks, and died from three to six weeks later unless protected by the addition of orange juice to the diet.

METAGEN

Metagen was used as a possible prophylactic and curative agent in pigeons fed on the rice and water diet. We have previously quoted from the literature on Metagen, in which it is stated that it contains water soluble B vitamin. The manufacturers further state in their literature:

> This syndrome requires three or four weeks for its production, but one administration of water-soluble antineuritic vitamine will bring about complete recovery (except from loss in weight) in six to eighteen hours.

The manufacturer's literature recommends 10 grains of Metagen a day for an infant. In our experiments, twice this amount was fed to the pigeons daily by means of a medicine dropper. The product was suspended in from 3 to 5 c.c. of water and fed immediately after mixing.

Group 1 was fed a diet of polished rice and water.

Group 2 was fed polished rice and water, and 20 grains of Metagen daily.

Group 3 was fed polished rice and water, and 1 gm. of fresh commercial yeast daily (one cake of commercial yeast weighed from 12 to 14 gm.).

RESULTS

The five pigeons in Group 1 developed polyneuritis in from three to four weeks. Two of these birds were then placed on 20 grains of Metagen daily. One of the pigeons which was still in the early stages made a complete recovery after seven days of treatment. The second pigeon, which had developed the disease in a severer form, slowly recovered from polyneuritis during two weeks of treatment; the bird, however, remained very weak and died at the expiration of eighteen days. Two birds, which were kept on the diet without treatment, died within one week after the onset of the disease.

The birds in Group 2, two in number, were fed Metagen from the start. One pigeon remained free from beriberi for two and one-half months, and then rapidly developed a very severe degree of this disease, which responded rapidly to treatment with yeast. The other pigeon, after remaining free from polyneuritis for five weeks, was taken off Metagen, and developed the disease eighteen days later. While it was still in a mild form, Metagen (same dosage) was restarted, and the pigeon fully recovered in a week and was still in good condition three weeks later.

While two birds may seem a small number from which to draw conclusions, certain prominent facts were noted. The first one which developed polyneuritis showed signs only after ten weeks, about six weeks later than the controls. The second bird developed the disease after eighteen days on rice and water, following removal of Metagen from the diet; that is, in a somewhat shorter period than the normal control birds. For recovery from this attack the bird required one week on Metagen, 20 grains being administered daily.

The birds in Group 3 receiving fresh yeast were free from signs of polyneuritis after a period of three months. When stale yeast was used, which had become yellowish and soggy, they developed the disease in about six weeks.

VITAMON

Vitamon was studied in a similar manner in two pigeons.

The dose was six tablets daily, the recommended adult dose. We have already quoted from the literature of the producer, in which it is stated that this product contains the concentrated yeast vitamins.

RESULTS

Two pigeons developed a very severe polyneuritis in about seven weeks. They recovered rapidly when Vitamon was stopped and 1 gm. of fresh commercial yeast fed daily. One of the birds, which had developed polyneuritis and was cured again with fresh yeast, was again placed on Vitamon, and redeveloped clinical signs within two weeks.

YEAST VITAMINE-HARRIS

Yeast Vitamine-Harris also was studied. Quoting from the manufacturer's literature:

> Each Yeast Vitamine-Harris tablet, by actual biological test, contains approximately the amount of water soluble vitamine found in an ordinary domestic cake of bakers' yeast.

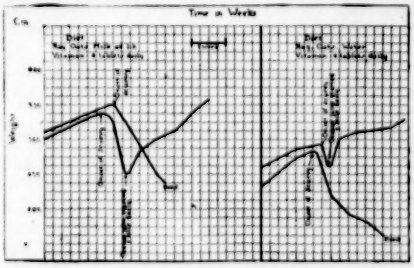

Chart 7.—Guinea-pigs fed hay, oats, milk or water and Vitamon, four tablets daily, developed scurvy in from fourteen to sixteen days, and died within two weeks unless protected by the addition of orange juice to the diet.

The tablets can be taken whole; two, three times daily. It will not endure prolonged heating with other foods.

This product was studied in a similar manner to Vitamon.

RESULTS

One pigeon receiving rice, water and three tablets of Yeast Vitamine-Harris has remained free from polyneuritis for three months. Other pigeons on a similar diet, but for a shorter time, also remained well. One pigeon on

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this product remained well for five weeks; when the tablets were stopped, subsequently, after fifteen days on rice and water, it developed polyneuritis of a severe type, and, after again being placed on three tablets of the same product daily, made a complete recovery, and is still well one month later. It showed great improvement within twenty-four hours. However, it should be noted that, according to the manufacturer, each pigeon was receiving daily water soluble B equivalent to that contained in three cakes of fresh yeast.

PRODUCT CONTAINING DRIED ORANGE JUICE AND DESICCATED PIG'S LIVER

Two pigeons were studied with a product containing dried orange juice and desiccated pig's liver.

The first pigeon, receiving 1 gm. daily, died at the end of three weeks without clinical evidence of polyneuritis. The second bird was allowed to develop the disease on rice and water, after which it was placed on 2 gm. of this product daily while the disease was still in its early stages. The pigeon, however, became progressively worse until it was unable to stand.

SUMMARY OF WATER SOLUBLE B PIGEON EXPERIMENTS

All pigeons fed on a diet of polished rice and water developed experimental polyneuritis on an average in three to four weeks. Those fed on the same diet but receiving 1 gm. (one-twelfth cake) of fresh commercial yeast daily remained free from the disease at the end of three months. One of the birds which received stale commercial yeast developed this condition at the expiration of six weeks.

A pigeon fed on Metagen as prophylactic treatment remained free from signs of polyneuritis for a period of ten weeks, after which time the disease developed. Birds in which the disease had developed were cured by the administration of Metagen, but less rapidly than pigeons in a similar condition placed on fresh yeast.

Pigeons on Vitamon developed polyneuritis, although less rapidly than the control birds, averaging about six weeks.

Yeast Vitamine-Harris Tablets prevented and cured polyneuritis in a manner similar to fresh yeast. In our experimental work, however, the equivalent of three cakes of yeast was fed daily.

CONCLUSIONS

It appears from the foregoing experiments that the process of manufacture and subsequent aging of the concentrated vitamin products have not caused as much deterioration of the antineuritic as of the antiscorbutic properties. All the products studied were very low in antiscorbutic properties, and while all of them contained water soluble B, they had a much lower potency than fresh yeast, with the possible exception of the Yeast Vitamine-Harris preparation.

The discovery of the vitamins, their classification and their relationship to nutrition, both in health and in disease, must be considered one of the great contributions to medical science. However, the claims that one or all of the known vitamins can be prepared for dispensing in a concentrated form which will not be affected by drying, aging and oxidation are, in the light of our experimental work, open to great question.

It is becoming more firmly fixed in the minds of leading investigators that, except to meet specific indications, as in times of famine and certain economic upheavels, such as in war, the best method of obtaining sufficient vitamins is through a proper selection of foods. Vitamins should be obtained from the dairy, the grocery and the market, not from the drug store.

ACUTE MERCURIAL POISONING FROM VAGINAL INJECTION

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RUSHVILLE, IND.

A few reports have appeared in the literature of acute mercurial poisoning resulting from the use of vaginal irrigations. None of these have followed the therapeutic application of such solutions, administered or advised by physicians, but all have occurred from efforts on the part of the patients themselves, chiefly as a preventive to conception.

REPORT OF CASE

Mrs. W. W., aged 23, a patient of Dr. W. R. Phillips, was the mother of two children, aged 22 and 8 months. She was nursing the younger child. Her labors had been normal, and she had never been sutured. She had been in the habit of irrigating the vagina twice weekly for some months with solutions of mercuric chlorid, using for the purpose a bulb syringe with an open, rectal nozzle, holding about 1,000 c.c. She never before experienced any ill effects from her douches.

Having passed her usual menstrual period by about two weeks, and fearing that she was again pregnant, on the night of March 20, 1922, she prepared a solution stronger than any she had previously used, dissolving one 7.3 grain (0.5 gm.) tablet in a pint (500 c.c.) of water.

Within an hour after the injection she was seized with violent pains in the lower abdomen, followed shortly by vomiting. Her physician was called and found her suffering intensely. The temperature was 97.6 F., and the pulse 100. He gave her a copious vaginal irrigation of warm water, milk and eggs by mouth, and a hypodermic injection of one-fourth grain of morphin for pain. A profuse and painful diarrhea began about two hours after the onset, with the passage of much blood-stained fluid. The vomiting continued.

The secretion of urine was markedly increased during the first five or six hours, after which it diminished until at the end of fourteen hours there ensued complete suppression. No change was noted in the quality or quantity of the milk, although nursing was interdicted and the breasts were drained with a pump.

In forty-eight hours she was seen in consultation. The vomiting and diarrhea were persistent. The temperature was slightly subnormal, the pulse 100 and of good quality. The mental condition was excellent. There were extensive gingival and buccal ulcerations and the breath was extremely foul, but there seemed to be no increase in the flow of saliva. The vaginal surfaces were ulcerated. The abdomen was moderately distended; there were frequent passages of bloody fluid with a few clots, and the patient still had attacks of vomiting. About 6 c.c. of yellow, turbid urine was obtained by catheter, examination of which revealed acid reaction, much albumin, no sugar, and sediment. Microscopically, there were blood and tube casts, with swollen cell remnants and débris from all portions of the kidney.

A modified Lambert-Patterson routine of treatment was begun. Four grams (60 grains) of potassium acetate to 500 c.c. (a pint) of water was given by rectal drip as a continuous proctoclysis. Albumin water and milk were given every hour by mouth, together with 4 gm. of sodium phosphate. Hypodermic injections of morphin were frequently necessary to control the pain accompanying the diarrhea. Hot packs were placed over the kidneys.

The patient's condition remained much the same until the sixth day, with subnormal temperature, vomiting, diarrhea and suppression of urine. The pulse became weak and rapid, and she died on the seventh day. The mind remained clear until a few minutes before death.

Necropsy revealed a general peritonitis of moderate degree. In the region of the hepatic flexure of the colon, the intestine, for a distance of about 14 inches, was markedly inflamed and infiltrated. The kidneys showed no increase in size, but were uniformly congested. The substance, on section, presented a cooked appearance. The pyramids were extremely prominent. The capsules stripped readily.

The uterus was normal in size, position and consistency. The ovaries appeared to be normal. The distal ends of both tubes were moderately inflamed and swollen. There were no other changes in any of the abdominal or pelvic viscera.

COMMENT

From the sudden onset of the symptoms in this case, it is highly probable that the solution passed into the uterus, and thence through the tubes into the peritoneal cavity, where it was rapidly absorbed. The absence of coma or other nervous and mental symptoms distinguish the case from toxic uremia. The paucity of necropsy findings was undoubtedly due to the short duration of the illness.

A similar fatal case was reported by Millar,[1] together with two cases by Campbell,[2] one of which resulted in death. Bland[3] has reported three cases with two deaths. In his case, in which the patient recovered, there were no general symptoms, although the local ones were severe. DePorte[4] records a case in which two 7.3 grain tablets of mercuric chlorid were inserted into the vagina. The absorption was so rapid that the patient died in twenty-four hours. The patient of McPeek[5] recovered after complete suppression of urine for seventy-two hours. Albumin and casts were found in the urine four months later.

The treatment in no way differs from that used when the poison is taken by mouth, with the exception of flushing the vagina with water. The antidotal and eliminative methods of Lambert and Patterson[6] or of Weiss,[7] when carried out early, offer the best hopes of success. The damage to the kidneys is irreparable, and, if early urinary suppression intervenes, the chances of a favorable issue are remote.

IN BEHALF OF THE STOMACH TUBE*

REGINALD FITZ, M.D.
ROCHESTER, MINN.

There is a growing tendency in this country to underestimate the value of the stomach tube in the diagnosis of diseases of the stomach and intestine. While no one can discredit the use of the roentgen ray for the purpose, nevertheless, it is timely to recall that the stomach tube, which has a long and honorable record, is not yet obsolete, but continues to afford material assistance in the proper clinical interpretation of roentgenologic findings, and may be an invaluable help to the general practitioner who has access neither to an expert roentgenologist nor to a well equipped laboratory.

According to Garrison, it is likely that the idea of introducing a hollow tube into the esophagus or larynx occurred to more than one person before 200 B. C. Whether or not this is true, the "stomach brush" was in usage throughout Europe about 1700 A. D., and the stomach tube was introduced to the medical profession by Physick of Philadelphia, in 1812, when he described "a new mode of extracting poisonous substances from the stomach," although Sir Astley Cooper's demonstration of the stomach pump for the same purpose to his students at Guy's Hospital, in 1823, is more generally known. Kussmaul, in 1869, used the tube in the treatment of pyloric stenosis, and initiated the large volume of work which has been done subsequently with gastric intubation for diagnosis or treatment. He was followed by Ewald in Germany and more recently in this country by Einhorn, Rehfuss, Sippy, Lyon and others. During the past decade, however, the importance of the tube for the diagnosis of gastric disease has been ignored by many physicians, apparently because of the more startling progress in roentgenology (Fig. 1).

Shortly after Roentgen's description of the ray which bears his name was published, Wolf Becher, a practicing physician in Berlin, made the first recorded roentgenologic picture of the stomach. Becher learned from reading Roentgen's paper not only that certain metals were impenetrable to the rays, but that the salts of these metals were likewise impenetrable. It occurred to him that this fact might become of clinical importance in the diagnosis of internal conditions if the hollow organs could be filled out with such salts and their silhouettes thus photographed. Accordingly, he killed a guinea-pig and injected the stomach with a solution of lead subacetate. On account of various technical difficulties, an imperfect injection was obtained. However, a subsequent roentgenogram of the body of the animal showed, hazily, the outlines of the stomach. Since then, as every one knows, roentgenologic technic and knowledge have been greatly perfected (Fig. 2).

PURPOSES AND LIMITATIONS OF THE TEST MEAL

Rehfuss and Hawk[1] have recently discussed the fundamental principles of test meals and gastric analyses. The examination of the contents of the stomach after a test meal has for its specific objects the determination of gastric motor activity, the determination of gastric secretory activity, and the recognition of such pathologic products as may offer a clue to the type of gastric disease present. Test meals and gastric analyses do not reveal changes in the form, position, contour or mobility of the stomach, nor are they designed to reveal such changes, which rightfully belong to the province of the roentgen ray.

Rehfuss and Hawk emphasize the necessity of the standardization of test meals in order to obtain any satisfactory understanding and interpretation of the results of their usage. This point is of great importance. All test meals have the same underlying principle, the record of the stomach's response to a known stimulus. The response of the stomach in shape and mobility to the stimulus of barium is visualized by the fluoroscope and roentgenogram, or its chemical reaction is studied by analysis of the gastric contents after food stimulation. It is illogical to expect that results from one type of test meal will always, by necessity, agree with the results from another and different type. For example, the fact that bread and water is retained by one stomach for an abnormally long time, thus demonstrating an abnormal mobility to this specific meal, does not necessarily mean that the same stomach will reveal an abnormal retention of barium, nor does the fact that normal gastric acidity is demonstrable by the Ewald

1. Millar: Brit. M. J., Aug. 14, 1917.
2. Campbell, W. R.: Mercuric Chlorid Nephrosis, Arch. Int. Med. **20**: 919 (Dec.) 1917.
3. Bland, P. B.: Mercuric Chlorid Poisoning from Vaginal Injections—Two Fatal, J. A. M. A. **74**: 1227 (May 1) 1920.
4. DePorte, Seymour: Rapid Absorption of Mercuric Chlorid in a Case of Poisoning, J. A. M. A. **74**: 1230 (May 1) 1920.
5. McPeek, Clayton: An Unusual Case of Mercuric Chlorid Poisoning, J. A. M. A. **75**: 672 (Sept. 4) 1920.
6. Lambert, S. W., and Patterson, H. S.: Poisoning by Mercuric Chlorid and Its Treatment, Arch. Int. Med. **16**: 865 (Nov.) 1915.
7. Weiss, H. B.: The Principles of Treatment in Mercuric Chlorid Poisoning, J. A. M. A. **71**: 1045 (Sept. 28) 1918.

* From the Section on Medicine, Mayo Clinic.

* Presented in abstract before the American Association of Physicians, Washington, D. C., May 2, 1922.

1. Rehfuss, M. E., and Hawk, P. B.: Gastric Analysis, I, Fundamental Principles, J. A. M. A. **76**: 371-373 (Feb. 5) 1921.

meal mean that high acid values will not be demonstrable in the same case after a test meal of different character. In interpreting the results of test meals, therefore, it is important to compare the results in a given case with the results of a series of normal cases studied in exactly the same manner, and to interpret the results in terms of the test meal that is used. Positive results with any type of test meal are always significant.

A great many types of test meal have been advocated for the study of gastric function, with both the roentgen ray and the stomach tube. The meal which has been most generally and satisfactorily used is that of Ewald and Boas. This consists, as modified by Eusterman in the Mayo Clinic, of 400 c.c. of cool water and 36 gm. of arrowroot biscuit given without preliminary lavage, to a stomach which has not received food or fluid during the previous twelve hours. Elaborate preparation is not required except that on the evening before the test, each patient is requested to eat an ordinary supper which contains meat, and about twelve hours before the test is made, a few dried raisins. The total gastric contents are removed through a Rehfuss tube an hour after the test meal is taken except in cases in which there is gross food retention, when a larger tube is used, and the gastric acidity for each hundred cubic centimeters is estimated by titration in terms of tenth normal acid. The free hydrochloric acid is determined by Töpfer's reagent, and the total acidity by phenolphthalein. The gastric content is also measured, sedimented, examined microscopically, and tested for the presence of occult or gross blood.

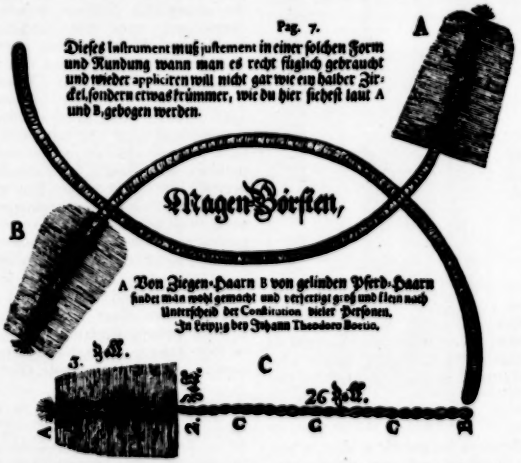
Pag. 7.
Dieſes Inſtrument muß juſtement in einer ſolchen Form und Rundung wann man es recht füglich gebraucht und wieder appliciren will nicht gar wie ein halber Zirckel, ſondern etwas krümmer, wie du hier ſiehest laut A und B. gebogen werden.
A
B
Magen-Börſten,
A Von Ziegen-Haarn B von gelinden Pferd-Haarn findet man meiſt gemacht und verfertiget: ein jedes nach Unterſcheid der Conſtitution dieſer Perſonen.
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Fig. 1.—Stomach brush, from a book by Socrates published about 1700 A. D. The illustration was obtained from the Surgeon General's Library through the courtesy of Colonel Garrison.

INTERPRETATION OF TEST MEAL FINDINGS

Various textbooks and manuals of laboratory technic outline slight modifications of these methods for the study of gastric contents. It has become a general custom to estimate only the percentage concentration of acidity, emphasizing hyperacidity, normal acidity, subacidity or anacidity as revealed by this test meal, and to consider the presence of occult blood or gross food remnants as of definite pathologic significance.

Such an interpretation of gastric acidity, theoretically, is open to at least one serious fallacy. Carlson [2] and Rosemann [3] have both called attention to the fact that there is no evidence for the assumption that the gastric glands are able to secrete hydrochloric acid in greater concentration than between 0.55 and 0.60 per cent. under any conditions. These glands may secrete acid less concentrated at times, but hyperacidity in the strictest sense of the word does not exist. It would seem, therefore, that percentages of acidity which appear to be higher than average normal acid values might be so because of concentration of acid of less than normal strength in the stomach through a specific absorption of water, or because of rapid excretion of water through the pylorus. On the other hand, acid values which appear lower than normal in terms of percentage might be derived from gastric juice of ordinary concentration which has become diluted by fluid retained in the stomach. In any event, it would seem rational to consider the possible relationship of the volume of the gastric contents at the time of the analysis to the percentage of acidity.

Formerly, when the gastric content was expressed through a large stomach tube it was impossible, as shown by Harmer and Dodd,[4] to empty the stomach with any constancy. Rehfuss, Bergeim and Hawk [5] have since demonstrated that the stomach can be emptied with greater regularity and thoroughness if the content is aspirated through a small tube. Therefore, a gastric content, sufficiently complete for clinical purposes, can be obtained after a test meal, and the concentration of hydrochloric acid in the sample, as well as the total volume of fluid which has been retained in the stomach as the result of a known stimulus, can be estimated with a fair degree of accuracy.

The results of Ewald test meals from 1,039 patients in the Mayo Clinic, in whom the diagnosis was controlled by roentgen-ray examination or laparotomy, were analyzed in order to determine whether such information could be correlated and expressed mathematically. The concentration of free hydrochloric acid expressed as cubic centimeters of tenth normal hydrochloric acid for each hundred cubic centimeters of gastric content was estimated as described. This figure was multiplied by the total volume of the gastric sample in cubic centimeters, and divided by 100. This product, in turn, was multiplied by the square root of the cubic centimeters of free acidity in order to give

2. Carlson, A. J.: A Note on the Chemistry of Normal Human Gastric Juice, Am. J. Physiol. **38**: 248-268, 1915.

3. Rosemann, R.: Zur Physiologie und Pathologie der Säureabsonderung der Magenschleimhaut, Arch. f. path. Anat. u. Physiol. **229**: 67-87, 1920.

4. Harmer, T. W., and Dodd, W. J.: Sources of Error in the Use of the Stomach Tube for Diagnosis, Arch. Int. Med. **12**: 488-502 (Nov.) 1913.

5. Rehfuss, M. E.: Bergeim, Olaf, and Hawk, P. B.: Gastro-Intestinal Studies, I, The Question of the Residuum Found in the Empty Stomach, J. A. M. A. **63**: 11-13 (July 4) 1914.

consideration to the concentration of acid as well as to the total volume of the sample. Such a formula is purely arbitrary, and is based on Ambard's[6] formula for urea excretion. It was chosen because the square root of any number was readily obtained on the 10-inch slide rule with which the results were calculated, and because this formula apparently gave results which

TABLE 1.—RESULTS OF THE EWALD MEAL WITH TWENTY-EIGHT NORMAL MEDICAL STUDENTS

	Gastric Content			
Case	Total C.c. (a)	C.c. N/10 Free Hydrochloric Acid for Each 100 C.c. (b)	(c) = a × b / 100	c √b
53	40	6	2	5
8	17	0	0	0
31	50	21	10	46
18	205	27	55	296
62	76	35	27	160
21	75	25	19	95
20	40	20	8	36
13	10	23	2	10
40	48	23	11	53
24	450	17	76	313
62	40	20	8	36
22	100	10	10	32
17	190	24	45	211
2	85	26	22	112
52	76	35	27	160
47	100	32	32	181
25	225	14	31	116
10	32	16	51	204
32	75	51	38	272
38	150	35	52	318
19	340	47	146	950
11	80	33	26	150
4	200	44	88	585
3	230	52	114	825
1	80	60	48	372
7	12	25	3	15
5	200	40	80	506
36	125	65	81	654
Average	119	29	34	193
Average of 100 normal Mayo Clinic cases	148	29	43	232

were of greater interest than those obtained from a consideration of the acid concentration or total volume alone. The free hydrochloric acid value was used in this survey as a matter of convenience and because it seemed to be as significant as the total acid value. The main features of this study are incorporated in the accompanying tables.

ESTABLISHMENT OF NORMAL VALUES

At the outset, normal values for gastric acidity, when estimated in this manner after an Ewald meal, were established by calculating the results obtained from twenty-eight healthy medical students reported by Wheelon,[7] and comparing them with the results obtained from 100 patients in the Mayo Clinic who did not have gastro-intestinal lesions demonstrable by the roentgen ray, or by physical examination (Table 1). Wheelon's medical students showed a disconcerting variability in concentration of free hydrochloric acid, and in total amount of fluid aspirated from the stomach after an Ewald meal, as did the 100 normal patients in the Mayo Clinic series, although the averages for the two groups were close. However, only three of Wheelon's students, and not one of the Mayo Clinic patients, had an acidity by the formula of more than 600 units, and only one had an acidity of more than 600 units with a gastric content of more than 300 c.c.

6. Ambard, L.: Physiologie normale et pathologique des reins, Paris, Masson & Cie, 1920, 368 pp.

7. The Ewald meal used by Wheelon consisted of two slices of white bread, and 500 c.c. of water. The stomach was emptied an hour after the test meal was ingested. The titrations were made according to the method described (Wheelon, H.: Relation of the Gastric Content to the Secretory and Motor Functions of the Stomach, Arch. Int. Med. 28: 613-631 [Nov.] 1921).

Assuming that results might be the same in a larger group, the data from the 1,039 patients in the Mayo Clinic were classified as follows:

Group 1, 730 patients with normal values, including all with total free acidity of less than 600 units by the formula.

Group 2, 171 patients with anacidity, including all without free hydrochloric acid demonstrable.

Group 3, eighty-nine patients with hyperacidity, including all with total free acidity of more than 600 units by the formula, but with a gastric content of less than 300 c.c.

Group 4, forty-nine patients with hyperacidity and stasis, including all with free acidity of more than 600 units by the formula and with a gastric content of more than 300 c.c.

Group 1. Of the 730 patients with normal gastric acidity as calculated in this manner, only ninety-two (13 per cent.) had organic diseases of the stomach. In other words, normal acid values excluded the presence of organic disease of the stomach with comparatively small error. Moreover, in only seven of the ninety-two patients in whom the diagnosis was overlooked were the conditions due to operable carcinoma. However, that operable carcinoma of the stomach may give normal test meal findings must be emphasized. A series of 200 proved cases of this type was analyzed in order to establish the point. In approximately one third of these the gastric acidity was normal after the test meal, and might, therefore, have been overlooked on test-meal findings alone. The patients with gastric and duodenal ulcers who made up the remaining eighty-five normal patients in the group illustrate how information derived from the test meal may be of value in treatment. Operations for gastric or duodenal ulcer have three definite purposes, namely, to effect rapid and permanent relief of symptoms, to reduce acidity, and to relieve motor insufficiency. It would seem logical to delay operation on patients with ulcer with normal gastric acidity and without pyloric obstruction, except when perforation or hemorrhage necessitates immediate surgical intervention, until a reasonable trial of medical treatment

TABLE 2.—THE EWALD MEAL IN TWELVE PATIENTS WHO WERE OPERATED ON FOR GASTRIC AND DUODENAL ULCER IN THE MAYO CLINIC AND WHO WERE OPERATED ON LATER FOR GASTROJEJUNAL ULCER

	Gastric Content				
Case	Total C.c. (a)	C.c. N/10 Free Hydrochloric Acid for Each 100 C.c. (b)	(c) = a × b / 100	c √b	Operations
A174821	60	40	24	152	10/ 9/16 and 7/27/21
A186721	50	38	19	117	6/ 3/16 and 12/28/17
A225679	80	52	42	303	5/ 3/18 and 12/ 3/18
176741	50	74	37	319	5/25/18 and 9/ 4/18
185473	110	56	62	465	3/21/17 and 3/20/18
156066	90	74	67	575	1/18/17 and 1/ 2/20
119416	250	30	75	410	11/27/14 and 11/17/17
125682	70	60	42	325	5/ 4/15 and 4/30/18
117055	50	66	33	268	2/ 2/17 and 9/17/18
A118450	250	48	120	832	11/13/14 and 6/21/17
A118045	250	80	200	1790	11/17/14 and 5/ 2/17
A294424	710	56	398	2980	11/ 6/19 and 9/10/20

has been made, on account of the possibility that such cases are of infectious origin and differ in etiology from cases associated with hyperacidity. Twelve patients with duodenal or gastric ulcer on whom gastroenterostomies were performed in the Mayo Clinic, and who returned later with gastrojejunal ulcers, were studied in order to discover what proportion belongs to Group 1. The results of this analysis appear in

Table 2. As may be seen, nine patients had normal acidity according to the formula, and only one had hyperacidity with stasis previous to the first operation. The patients are too few in number to furnish significant data, although one is led to suspect that these nine patients might have derived as much permanent benefit from a preliminary course of medical treatment and

TABLE 3.—CASES OF HYPERACIDITY AND STASIS DEMONSTRATED BY THE ROENTGEN-RAY AND OPERATIVE FINDINGS*

Case	Total Gastric Content, C.c.	Acidity, Units	Roentgen-Ray Evidence of Gastric Retention	Condition of the Stomach at Operation
1 (A 322736)	300	818	0	Pyloric obstruction 1+; stomach dilated 1+
2 (A 306762)	305	1,075	0	Pylorus narrowed; stomach not dilated
3 (A 335773)	300	1,200	2	Duodenum markedly deformed; stomach normal
4 (A 313720)	320	647	1 to 2	Stomach dilated 1+
5 (A 314960)	225	1,352	0	Pyloric obstruction 2; stomach not dilated
6 (A 311801)	375	1,000	0	Stomach dilated 2+
7 (A 342179)	400	1,240	2	Pyloric obstruction 2; stomach dilated to twice normal size
8 (A 342365)	425	920	0	Stomach dilated 1
9 (A 331481)	480	2,000	2	Marked obstruction; stomach very large
10 (A 320017)	500	1,770	3	Marked obstruction; stomach much dilated
11 (A 318691)	500	822	2	Marked obstruction; stomach much dilated
12 (A 314692)	510	1,800	2	Stomach slightly dilated
13 (A 313721)	570	755	3	Pylorus constricted; stomach dilated 2 to 3
14 (A 338318)	1,000	1,980	3	Stomach dilated 2
15 (A 341883)	1,000	3,980	3	Stomach dilated 3
16 (A 316882)	1,000	2,920	2	Stomach markedly dilated
17 (A 312508)	1,000	1,482	2	Stomach markedly dilated
18 (A 251053)	1,010	649	3	Stomach markedly dilated
19 (A 324357)	1,025	3,200	3	Stomach markedly dilated
20 (A 324127)	1,200	3,184	3	Stomach markedly dilated

* In this table the degree of stasis and pyloric obstruction is measured on the basis of 1 to 4.

removal of focal infections as they did from the original operations.

Group 2. Of the 171 patients with anacidity, thirty-one (18 per cent.) had cancer in or adjacent to the stomach. Three other definite maladies were often associated with anacidity: pernicious anemia, well marked arteriosclerosis in elderly persons, and chronic diarrhea. There were, besides, a large number of cases in younger persons recorded as achylia gastrica. The chief point of interest to this paper, brought out by this group as a whole, is the fact that while anacidity is a frequent accompaniment of gastric cancer, yet, cancer is by no means the most common cause of anacidity. In a given case of anacidity, therefore, cancer may be logically suspected, but must be demonstrated by other methods before a positive diagnosis can be made.

Group 3. The most striking feature of the group of eighty-nine patients with hyperacidity without stasis was that 50 per cent. had associated demonstrable organic lesions in the stomach, duodenum, gallbladder or appendix. In the absence of roentgenologic control, it meant that there was an even chance that the gastric symptoms for which the test was made were due to organic lesion which was often operable, and with negative roentgenologic findings that the hyperacidity might be reflex from chronic appendicitis or cholecystitis. In the presence of hyperacidity, a very careful history must be taken and the examination for these conditions must always be made, before we fall back on the diagnosis of a functional type of indigestion.

Group 4. Of the forty-nine patients in this category, forty-two (86 per cent.) were considered to have lesions in the abdominal cavity, and only seven (14 per cent.) were classified as having a functional type of indigestion. Furthermore, twenty-four of the twenty-five patients with gastric content of more than 400 c.c. had obstructive lesions near the pylorus, as proved by the roentgen ray or by laparotomy. The data concerning patients with pyloric obstruction who were operated on and in whom the surgeons noted the size of the stomach were tabulated in order to compare the information gained at the operating table with that obtained beforehand with the roentgen ray and the stomach tube (Table 3).

The results from both diagnostic methods were essentially alike in revealing any marked disturbance of gastric motor functions. This is of practical importance, because pyloric obstruction is a form of intestinal obstruction which is often treated surgically. Whenever the diagnosis can be accurately established by the tube, therefore, the stomach should be washed clean and kept emptied previous to operation. Any more complicated test meal is unnecessary and may be dangerous.

Fig. 2.—Roentgenogram of guinea-pig (from Becher).

SUMMARY AND CONCLUSIONS

In order to recall the clinical importance of the stomach tube in diagnosis, and to reawaken interest in one of our oldest and most simple laboratory procedures, an attempt was made to standardize the Ewald test-meal findings according to a mathematical formula which gave significance to the total volume of the gastric content as well as to the free acidity for each hundred cubic centimeters. The results appeared to be of clinical interest. By interpreting acidity in the manner described, it was possible to divide the results from a series of patients into four simple groups, each one of which was of diagnositic value.

The values in Group 1, normal values, had an error of about 13 per cent. The pathologic cases included in the normal group consisted of duodenal or gastric ulcer; rarely of operable cancer. The duodenal and gastric ulcers were of especial interest. Since the operative treatment of ulcer is designed not only to effect rapid and complete relief of symptoms, but also to overcome stasis and reduce acidity, it would seem logical to treat by medical measures for a reasonable period of time those cases of ulcer without hyperacidity and without stasis, except when perforation or hemorrhage necessitates immediate surgical intervention. The possible undesirability of treating such patients by surgery at the outset is suggested by the fact that of twelve patients with ulcer in the series who were known to develop a gastrojejunal ulcer after gastroenterostomy, nine had a normal acidity formula when they were first observed, and only one had hyperacidity and stasis.

Anacidity was found with comparative frequency in the series. This finding should suggest the presence of carcinoma, but is not pathognomonic.

Hyperacidity without stasis was of importance. Fifty per cent. of such cases were associated with gastric or duodenal ulcer, chronic cholecystitis, or appendicitis. This finding, therefore, is of diagnostic value even in the absence of all other signs or symptoms.

Hyperacidity with stasis determined in the manner described was of great significance. In 86 per cent. there was an organic basis for the finding. Stasis determined by the tube was as true an indicator of the stasis subsequently found at operation by the surgeon as was stasis revealed by the roentgen ray.

These facts are sufficient to demonstrate the importance of simple gastric analysis in the routine study of patients with gastric and intestinal symptoms, and to suggest that the relation between gastric acidity and gastric volume after a test meal can be expressed mathematically in a way to afford practical information.

CLINICAL SIGNIFICANCE OF ALTERED INTRATHORACIC EQUILIBRIUM IN PNEUMOTHORAX

WITH SPECIAL REFERENCE TO OPTIMAL PRESSURES *

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In a recent publication entitled "Intrathoracic Equilibrium in Penumothorax," [1] we discussed in some detail the mechanics and dynamics of this problem. In the present communication we purpose to restate as briefly as possible the fundamental ideas of the earlier contribution and to discuss in some detail the other phase of the subject, namely, the clinical effects of the altered intrathoracic equilibrium in pneumothorax.

Graham and Bell [2] touched the heart of the subject, when they came to the conclusion that: "From the standpoint of pressure relations, the thorax may be considered as one cavity instead of two. Any change in pressure in one pleural cavity will affect also the other one almost equally. The common conception of collapsed lung on one side and 'healthy' or 'normal' lung on the other in the condition of open pneumothorax in the otherwise normal chest must be erroneous." This, they prove, applies as well to closed pneumothorax in chests relatively free from adhesions.

This fundamental conception has been corroborated by Simon [3] and Betchov,[4] in their experimental studies on the effect of pneumothorax on the pressure conditions in the untreated side in men and laboratory animals; and the results of our own experiments in a small but carefully studied series of rabbits also support this view.

Clinically, the phenomenon of the so-called "movements of balance" (i. e., the inspiratory displacement of the mediastinum toward the pneumothorax side and the paradoxical movement of the diaphragm) are perhaps the best illustrations of the delicacy with which the intrathoracic equilibrium is adjusted in pneumothorax in the presence of a flexible mediastinum and an inert diaphragm.

Our conclusions were: In the presence of a flexible mediastinum, the intrathoracic equilibrium in pneumothorax is very delicately adjusted, and any disturbance in the intrathoracic pressure on the treated side will have a proportionate effect on the intrathoracic pressure on the untreated side as well as produce a readjustment in the position of the mediastinal structures. On the other hand, with a mediastinum effectively fixed by adhesions, the effect of unilateral pneumothorax on the opposite side is practically negligible, for the rigid mediastinum will stand the brunt of the increased intrathoracic pressure on the pneumothorax side without transmitting it to the untreated side.

Bearing these fundamental principles of pneumodynamics in mind, we may now consider the clinical effects of the altered intrathoracic equilibrium in pneumothorax.

It is apparent that when the pneumothorax is localized by extensive adhesions, or the mediastinum effectively fixed, or both, high positive intrapleural pressure, even up to between 40 and 50 mm. of mercury, will cause no appreciable effect on the pressure conditions of the opposite side or the size and function of the untreated lung. Under such circumstances, as high pressure as can be borne in the particular case may be given in the presence of a therapeutic indication.

Such an indication exists particularly in cases in which the symptoms and signs point to a tendency toward obliteration of the pleural cavity, whether or not this occurs as a result of a complicating hydropneumothorax. Experience has taught us that such pleural obliteration can be avoided in some cases and delayed in others by the judicious recourse to gradually increasing positive intrapleural tension. Unless this procedure is resorted to in these cases, a loss of pneumothorax will occur and the affected lung will rapidly reexpand, laying open the diseased foci and excavations, for the very relief of which the lung was collapsed. The danger of this reexpansion is particularly great because, once lost control of and given a chance to progress, pleural obliteration will preclude the possibility of resuming successful collapse therapy. It is unfortunate, indeed, that in some of these cases the pressure cannot be raised high enough because the gas under pressure escapes through the needle puncture into the adjoining and often surrounding subcutaneous tissue. And while a positive pressure of from 30 to 50 mm. of mercury may occasionally cause some adhesions to rupture, this unfortunate occurrence is not frequent enough to warrant an abandonment of this procedure in most cases.

It is different in the case of a flexible and labile mediastinum. Here increased intrapleural pressure on the pneumothorax side means not only proportionate increase of pressure on the opposite side but also a definite compression of the untreated lung. With one lung collapsed and the untreated lung somewhat involved, as it usually is in many cases subjected to collapse therapy, every effort should be made to embar-

* From the Montefiore Country Sanatorium.
* Read before the Clinical Section of the Eighteenth Annual Meeting of the National Tuberculosis Association, Washington, D. C., May 4, 1922.

1. Stivelman, B. P.; Hennell, Herman, and Golembe, Harry: Am. Rev. Tubere. **6**: 95 (April) 1922.
2. Graham, E. A., and Bell, R. D.: Am. J. M. Sc. **156**: 839 (Dec.) 1918.
3. Simon, S.: Am. Rev. Tuberc. **5**: 620 (Oct.) 1921.
4. Betchov, N.: Schweiz. med. Wchnschr. **51**: 43 (Oct. 27) 1921.

rass as little as possible the untreated organ, which is now forced to perform the function of respiration practically unaided. Many of our failures in pneumothorax are, no doubt, due to the reactivation of tuberculous foci in the untreated lung, and might have been avoided by a more thorough appreciation of the pneumodynamics involved.

In these cases of bilateral involvement we must endeavor by patient observation to determine the amount of compression which the untreated lung can stand as a result of the increased intrapleural pressure on the treated side. Indeed, this is the most difficult problem to solve in cases that fall in this category.

Those who are most competent to judge have long realized that there is no such thing as a standard optimal pressure, even in the simpler pneumothorax cases. Each patient is a law unto himself. A pressure which is sufficient to bring about an arrest of the disease in one case may be distinctly injurious in another. At one time we aimed to establish a positive pressure of about 4 cm. of water at the fourth inflation in all cases. We know of a patient who would have lost his life as a result of a telephone order to induce a positive pressure of 4 cm. had it not been for the quick action of the assistant, who, realizing the distress of the patient, withdrew some air by using the simple expedient of lowering the gas reservoir, i..e., reversing the siphonage until the patient was relieved. No dogmatic statements are possible, although it is generally observed that the best results are more frequently obtained when the intrapleural tension can be maintained at about — 2 to — 3 cm. of water. In such cases the affected lung is usually effectively collapsed and the untreated lung, by virtue of the flexible and labile mediastinum, is but lightly compressed.

Evidence is accumulating to the effect that this light compression of the so-called untreated but somewhat diseased lung is of entirely salutary nature. The progress of the tuberculous foci which are thus compressed may be definitely arrested, and even areas of consolidation and cavity formation are often beneficially affected. We count among our outstanding successes many patients whose untreated lung was definitely and often actively affected prior to the induction of pneumothorax on the opposite, more diseased lung.

When, on the other hand, the intrapleural pressure is rapidly increased in such cases and the mediastinum is markedly displaced toward the untreated, less affected lung, forcibly compressing it, the threshold of safety is soon passed and deleterious effects are not long in appearing. The crowding of the untreated organ and the great amount of atelectasis produced in it may endanger life by the marked diminution in the respiratory function of the only working lung. Furthermore, the great decrease in negativity in the intrapleural pressure on the untreated side must be overcome by more strenuous inspiratory efforts. These factors, added to the existing disability of the already overworked organ, sooner rather than later fan the flame of activity, which, if not quickly recognized and promptly relieved, soon passes beyond our control.

Among the few therapeutic indications for a slight positive pressure, even in the presence of a flexible mediastinum, may be mentioned the existence of thick walled active vomicae and hemoptysis. However, in compressing for hemoptysis, contrary to general belief, it is not always necessary to create high intrapleural pressure. It is an accepted fact that most hemorrhages arise from branches of the pulmonary veins, which, as a rule, are easily compressible. When the bleeding is due to an erosion of an aneurysm of Rasmussen traversing a rigid walled cavity, no amount of pressure applied through a medium of pneumothorax may suffice to ligate it. There are exceptions to this rule, and in such cases, after trying a zero pressure, it may be necessary in view of the emergency to resort to higher pressures.

It is not generally appreciated that the circulatory apparatus is profoundly and unfavorably affected in cases in which the mediastinal structures are markedly dislocated. As it has been shown, a diminution in the negativity of the intrapleural pressure at once interferes with, if it does not completely destroy, the aspiratory factor in the venous blood return, which can be compensated for only by increased cardiac action. The dyspnea and cyanosis attending marked mediastinal displacements are in a great measure due to cardiac embarrassment and perhaps kinking of some of the larger vessels.

Experience has taught that although the heart will tolerate a great deal of dislocation and accommodate itself to its new position and altered intrathoracic pressure, if these take place gradually, it will nevertheless be severly embarrassed if this new position and pressure relation are quickly changed. It is for this reason that severe cardiorespiratory failure and even death may occur as a result of sudden and marked disturbance of intrapleural tension following aspiration of copious pleural effusions. The rapid restoration of the intrathoracic equilibrium to which the heart had recently accomodated itself by the inflation of gas into the affected pleural cavity will in a few seconds relieve this distressing chain of symptoms, and may even prevent a fatal issue.

SUMMARY AND CONCLUSIONS

The study of the pneumodynamics in general and its mechanism in pneumothorax, and the experimental evidence on the effect of pneumothorax on the intrathoracic equilibrium, as well as the accumulated clinical experience, helped us to formulate certain guiding principles in the management of pneumothorax cases as far as pressures are concerned.

In initial inflations and in the early refills, it is imperative to alter the intrathoracic conditions as gradually as possible. (It is our usual procedure to give the patient from 200 to 400 c.c. at each of the first few refills, gradually lengthening the intervals from one to seven days, and cautiously raising the amount of gas and pressure.) This allows the patient to pass through this period of compression with as little discomfort as possible. From the study of the signs and symptoms during this period, as well as from the roentgenoscopic appearance of the treated and untreated lungs, it is possible to determine the optimal pressure for each case.

In the presence of a flexible mediastinum, high pressure should at all times be avoided. A slight positive pressure may be given only in the presence of strong indications (hemorrhage, thick walled active vomicae). This principle is particularly adhered to when there is considerable involvement of the untreated side. Here again each case must be individualized and carefully observed.

Sudden changes in the intrathoracic conditions should never be permitted. For this reason all con-

nections with the pneumothorax apparatus should be prearranged in aspirating hydropneumothorax cases, to enable us to reinflate quickly if necessary. Failure to do this may give rise to distressing symptoms and even lead to a fatal issue as a result of acute cardiorespiratory embarrassment.

In brief, our guiding principles in the management of pressures in pneumothorax are:

1. To avoid sudden change in the intrathoracic equilibrium and in the relative position of the intrathoracic viscera.
2. To avoid high pressures in the presence of a flexible mediastium.
3. Gradually but definitely to increase the positive intrapleural pressure in cases in which pleural obliteration is threatening.
4. To individualize the cases, determining the optimal pressure requirement of each.

SURGERY OF NONHYPERPLASTIC OVARIAN CYSTS*

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OMAHA

Ovarian cysts may be divided into hyperplastic and nonhyperplastic types, more commonly called the proliferative and simple cysts, respectively. The

Fig. 1.—Upper third of cyst wall amputated.

hyperplastic or proliferative cysts, represented by the teratomatous, adenomatous and papillary cysts of varying degrees of malignancy, increase in size more through a hyperplasia of the cells of the cyst wall. The nonhyperplastic or simple cysts, represented by the follicular and simple glandular cysts, increase in size through an accumulation of fluid secreted by the cyst wall. In the former, the fluid is of secondary importance; in the latter, primary.

The nonhyperplastic or simple cysts of follicular origin are normally always present, being a product of

Fig. 2.—Cyst wall turned outward and downward, and retained by mattress suture.

the many thousands of cysts with which the ovary has been endowed, each containing at one time an ovum. The ovary is normally a multicystic organ, and its premenstrual and postmenstrual functions are accompanied by cystic hypertrophy of varying degrees, which must be kept in mind when one is dealing surgically with the female generative organs, since the ovary deserves the same respect as the testicle, which we know is conserved to the utmost.

SIMPLE FOLLICULAR AND GLANDULAR CYSTS

The simple follicular and glandular cysts generally disappear or remain a size of no clinical significance. Not infrequently one, or two or more combined, enlarge to form a tumor requiring surgical consideration. With a normal ovary on the opposite side, the treatment of these cysts may be a simple ovariectomy. Not infrequently the only remaining ovary becomes cystic, and in four instances during the last eight years I have adopted the following method of treatment (Figs. 1 and 2):

The upper third of the cyst wall is evenly removed, and the upper border of the remaining cyst wall is curled downward and outward upon itself. This curl, which covers the raw edge and keeps open permanently the cystic cavity for drainage, is maintained by the con-

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tinuous mattress fine catgut suture. The operation only slightly resembles the bottle operation on the cystic tunica vaginalis, and I have found no reference in the literature to any similar operation. Schäfer [1] reports one case in which he performs the true bottle operation, as is done with the tunica vaginalis, which, however, is not so acceptable with the ovary, owing to the more or less constant cystic secretions being expelled from its surface, which would tend to form another cyst inside the inverted cyst wall. The operation I have described, of everting the cyst wall upon itself, is possible only when the cyst wall has reached a size allowing for a curling back of its edges, and it is far preferable to the operation of the so-called "resection," which leaves a hard, scarred stump, causing generally more disturbance than the original disease.

INFLAMMATORY CYSTS

The inflammatory cyst, unlike the follicular and simple glandular types, which are generally unilateral and single, is usually bilateral and multiple, owing to the previous infection attacking, as a rule, both tubes. These cysts rarely reach a size greater than from 3 to 5 cm. in diameter, and as a rule the ovaries are intimately attached to the tubes by inflammatory adhesions. They are found most frequently in women too young to lose the ovarian secretion, and are generally treated by complete surgical removal. Any conservative procedure here is worth considering, and I have found the

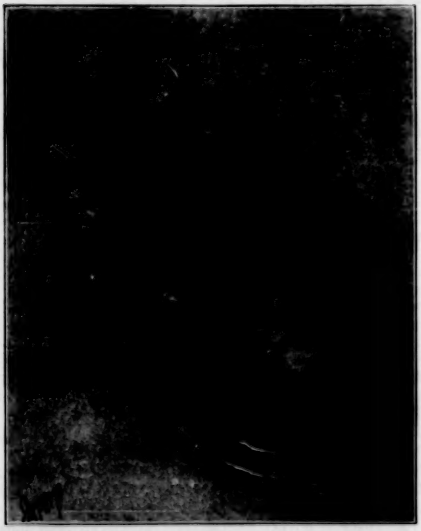

Fig. 3.—Ovary split, showing in one half the remaining portions of inflammatory cysts, in the other half the cyst walls dissected out.

following operations most satisfactory during the last eight years in about ten instances (Figs. 3 and 4):

Both ovaries are conserved if possible, but generally one is too cystic to contain ovarian tissue of any moment. The ovary is split cleanly in two, care being used to avoid injuring the proximal blood supply, only distal ligations of vessels being practiced. The pedicle is thereby left intact, a most essential step. All cysts are carefully dissected free, leaving ovarian tissue more or less mutilated in the shape of a plaque from 0.25 to

Fig. 4.—Remnant of ovarian tissue applied to posterior wall of uterus and broad ligament.

1 cm. in thickness, a more or less patchy remnant. In place of sewing this in a mass or endeavoring to reunite the two halves, both procedures resulting in a superabundance of scar tissue, I have applied in ten instances, the flat raw surface to the posterior surface of the broad ligament or uterus with fine catgut, covering carefully all raw surfaces. Several mattress sutures are applied in the central portion, to prevent an accumulation of fluid beneath the ovarian tissue. One of the patients has become pregnant since, in whom a plastic on the distal end of the remaining tube was performed; in the others, who remained sterile, the tubes were removed. No patient complained of pain because of the remaining ovarian tissue, nor to my knowledge has any further cystic disease developed.

834 Brandeis Theater Building.

1. Schäfer, A.: Zentralbl. f. Gynäk. 45:1248 (Sept. 3) 1921.

Standardised Health Work.—Through its personnel at headquarters and in the field, the public health service should standardize all health work, and should cooperate with the medical profession, the state and local medical and lay organizations in all health and welfare activities. Success in public health work can be attained only by cooperation with the members of the community who must operate all of the activities which are utilized in health and welfare work. Community interest must be aroused by the education of the people. This may be done by local, district or statewide conferences, and by publicity reinforced by lectures from the pulpit, the school rostrum, at Chautauquas and the like.—F. Billings, *Hospital Social Service* 5:217 (April) 1922.

CORRELATION OF EFFICIENCY TESTS

PRELIMINARY REPORT

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AND
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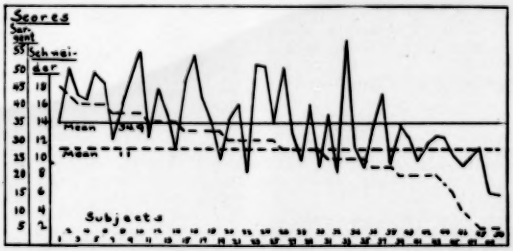
This is an age of functional tests and measurements. The time has passed when fifty or more anthropometric determinations of size are made in the physical examination of one subject. Instead, the efforts to secure data on the functioning power of the human organism are becoming increasingly more numerous.

The tests that have attracted the most attention are the tests of circulatory efficiency and of physical efficiency. In the former, the proposals of Crampton,[1] Foster,[2] Barringer [3] and Schneider [4] have been favorably received. While these tests are still *sub judice*, they have given encouraging results in some places. In the physical efficiency group, the recent test proposed by Dr. Sargent [5] has awakened considerable interest because of its simplicity and the apparent soundness of the principle involved.

The question was raised concerning the possible correlation between a cardiac efficiency test and a physical efficiency test. It was asked, "Why should not cardiac efficiency express itself in terms of physical efficiency?" Surely, the opposite would be true. If the heart is not efficient, the inadequate circulation would be expressed in terms of deficient oxygenation of tissues, deficient waste removal, and hence in general physical unfitness.



Relation between circulatory and physical efficiency, as shown by the Schneider and Sargent tests applied to fifty subjects: solid line, Sargent test; Broken line, Schneider test; Pearson coefficient of correlation, 0.57.

It was proposed to examine a group with a cardiovascular test and a physical efficiency test. For this purpose, fifty males were selected. This group varied in age from 11 to 36 years, in height from 4 feet 6 inches (137 cm.) to 6 feet (183 cm.), and in weight from 75 to 200 pounds (34 to 91 kg.). The tests chosen for the experiment were the Schneider [4] rating of cardiovascular efficiency and the Sargent [5] test of a man.

The tests were given at one time. The method of procedure was to give the Schneider test first, and immediately follow it with the Sargent test. The tests were given as directed by Schneider [4] and Sargent.[5]

The Schneider cardiovascular rating determines the pulse rate reclining and its increase on standing, the pulse rate standing and its increase with exercise of a definite kind (stepping on a chair 18 inches [46 cm.] high five times in fifteen seconds), and its decrease to standing normal after exercise. Blood pressure readings are also made on reclining systolic and standing systolic. The different values secured are assigned points so that a total score is recorded in the responses of heart rate and blood pressure to change of position and to exercise. A perfect score is 18; anything less than 9 is considered characteristic of physical unfitness.

The Sargent test seeks to measure strength, speed and energy by determining how far a person can project his body vertically upward. The subject to be tested stands under a cardboard disk held from 10 to 20 or more inches (25 to 50 cm.) above his head. "He is then requested to bend forward, flexing the trunk, knees and ankles, and then by a powerful jump upward, straightening the legs and spine, to try to touch the cardboard disk with the top of the head." The difference between the height of the disk as touched and the individual's own height is, of course, the height jumped.

Several different work formulas are combined into one for the purpose of securing an index. The formula used is:

$$\text{Index} = \frac{\text{Weight} \times \text{Jump}}{\text{Height}}$$

The results of the two tests are given in the table,[6] and the graphic illustration of the two in the chart.

It will be noted that the coefficient of correlation is 0.57. The probable error for the fifty cases is 0.0648. It is probable that the correlation is high because of the wide range in age of the group. The tests are being tried out also on particular age groups, to be reported later.

It was observed that stout persons received as a rule a low Schneider rating, probably because their pulse rate invariably is higher than in persons of the same height but of less weight. The same group, however, rated relatively higher in the Sargent test than those of the same height and of less weight.

It was also observed that the younger members of the group invariably received a low Schneider and a low Sargent rating. This was probably due to different factors. In the former it was undoubtedly due to the higher pulse rate of the younger ages of this part of the group, and in the latter to the lower weight attendant with underdevelopment in this part of the group.

SUMMARY

1. There is a very definite correlation between the Schneider cardiovascular test and the Sargent physical test. This correlation is not perfect (perfect correlation = 1), but is high for such diverse tests. The wide age range of the group tested gives only a limited distribution of any one age, and hence repetition of the

1. Crampton, C. W.: New York M. J., Nov. 8, 1913; Tr. Fourth Internat. Cong. School Hyg. **3**: 555, 1913.
2. Foster, W. L.: Am. Phys. Ed. Rev., November, 1918, p. 632.
3. Barringer, T. B.: Cardiac Function, Arch. Int. Med. **17**: 363 (March) 1916.
4. Schneider, E. C.: A Cardiovascular Rating as a Measure of Physical Fatigue and Efficiency, J. A. M. A. **74**: 1507 (May 29) 1920.
5. Sargent, D. A.: Am. Phys. Ed. Rev., April, 1921, p. 188.
6. The Method of computation is given by Rugg, H. O.: Statistical Methods Applied to Education, Boston, Houghton, Mifflin Company, Boston, 1917.

experiment with more homogeneous groups is needed to verify the obtained coefficient.

2. The high correlation shows that cardiac efficiency is probably a good indication of general physical efficiency.

3. It will probably be necessary to revise the Schneider test to allow for the normal variation in pulse rate in the age ranges before and during adolescence.

RESULTS OF TWO TESTS

Case No.	Schneider Test	Sargent Test	X	Y	XY	X^2	Y^2
1	18	34.3	7	— 0.6	— 4.2	49	0.36
2	17	50.4	6	15.5	93.0	36	240.25
3	16	42.5	5	7.6	38.0	25	57.76
4	16	41.7	5	6.8	34.0	25	46.24
5	16	48.0	5	13.1	65.5	25	171.61
6	16	46.0	5	11.1	55.5	25	123.21
7	15	30.3	4	— 4.6	—18.4	16	21.16
8	15	40.7	4	5.8	23.2	16	33.64
9	15	39.4	4	4.5	18.0	16	20.25
10	15	44.8	4	19.9	79.6	16	396.01
11	14	30.7	3	— 4.2	—12.6	9	17.64
12	14	43.8	3	8.9	26.7	9	79.21
13	14	36.7	3	1.8	5.4	9	3.24
14	14	27.2	3	— 7.3	—21.9	9	53.29
15	13	46.0	2	11.1	22.2	4	123.21
16	13	53.3	2	18.4	36.8	4	338.56
17	13	41.8	2	6.9	13.8	4	47.61
18	13	35.3	2	0.4	0.8	4	0.16
19	13	23.1	2	—11.8	—23.6	4	139.24
20	12	35.4	1	0.5	0.5	1	0.25
21	12	40.2	1	5.3	5.3	1	28.09
22	12	21.8	1	—13.1	—13.1	1	171.61
23	12	51.7	1	16.8	16.8	1	282.24
24	12	51.3	1	16.4	16.4	1	268.96
25	12	34.9	1	0.0	0.0	1	0.00
26	11	50.3	0	15.4	0.0	0	237.16
27	11	31.8	0	— 3.1	0.0	0	9.61
28	11	24.0	0	—10.9	0.0	0	118.81
29	11	38.9	0	4.0	0.0	0	16.00
30	11	22.5	0	—12.4	0.0	0	153.76
31	10	36.1	—1	1.2	— 1.2	1	1.44
32	10	21.7	—1	—13.2	13.2	1	174.24
33	10	58.0	—1	23.1	—23.1	1	533.61
34	10	27.9	—1	— 7.0	7.0	1	49.00
35	10	22.8	—1	—12.1	12.1	1	146.41
36	9	32.7	—2	— 2.0	4.4	4	4.84
37	9	42.8	—2	7.9	—15.8	4	62.41
38	9	23.5	—2	—11.4	22.8	4	129.96
39	8	34.1	—3	— 0.8	2.4	9	0.64
40	8	31.2	—3	— 3.7	11.1	9	13.69
41	8	24.6	—3	—10.3	30.9	9	106.09
42	8	28.8	—3	— 6.1	18.3	9	37.21
43	8	31.2	—3	— 3.7	11.1	9	13.69
44	7	30.5	—4	— 4.4	17.6	16	19.36
45	6	25.3	—5	— 9.6	48.0	25	92.16
46	4	22.6	—7	—12.3	86.1	49	151.29
47	3	25.2	—8	— 9.7	77.6	64	94.09
48	2	27.6	—9	— 7.3	65.7	81	53.29
49	2	15.0	—9	—19.9	179.1	81	396.01
50	2	14.7	—9	—20.2	181.8	81	408.04
	550÷50	1,745.1÷50			Σxy 1,206.8	Σx^2 770	Σy^2 5,686.61
	Av., — 11	Av., — 34.9					

$$\text{Coefficient of correlation } (r) = \frac{\Sigma xy}{N\sigma x.\sigma y} = 0.57$$

Where

$N = 50$ = number of cases

$$\sigma x \text{ (from exact mean)} = \frac{\sqrt{\Sigma x^2}}{N}$$

$$\sigma y \text{ (from exact mean)} = \frac{\sqrt{\Sigma y^2}}{N}$$

Probable error = 0.0648

4. The Schneider test was evolved on adults. Its applicability to adolescents and preadolescents remains to be determined.

5. It has not been determined whether the same correlation holds for females.

Alcohol in Sweden.—Under the system of regulation of alcohol in Sweden, a great decrease in the annual consumption is reported. From January to March, 1920, 9,500,000 liters of spirits and 1,120,000 liters of wine were consumed, compared to 8,200,000 and 730,000, respectively, in 1921. In March, 1913, there were 15,000 reported cases of drunkenness throughout the country, and from January to March, 1920, only 6,800.

PHYSICAL EXAMINATION OF FOOD HANDLERS *

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An ordinance requiring the physical examination of food handlers has been in force in Kansas City, Kan., about one year. There have been some interesting findings, and some problems have arisen which remain unsolved. One of the outstanding problems is the relation of the family physician to the proper enforcement of the ordinance.

To recapitaulate somewhat on my findings previously reported,[1] 1,860 persons had been examined up to Nov. 1, 1921, by the Kansas City Health Department, and 249 had been examined by family physicians. In addition to these, 112 persons either left town or quit work as soon as the department started to enforce the ordinance. From the stories that we gathered, the vast majority of those who left town or quit work did so because they felt sure that they could not pass the examination.

Since Nov. 1, 1921, there have been 762 examinations by the health department, and thirty-four by family physicians. This make a total of 2,622 examined by our department, and 283 by family physicians. The department has refused permits in sixty-one cases, while the family physicians have refused none.

It is possible that all of the 283 persons examined by private physicians were physically qualified, but none of them had a Wassermann test, a sputum examination, or any other laboratory test to help the physicians arrive at their conclusions. Our inspector has often encountered persons who, thinking they could not pass the health department's examination, insisted on going to their family physicians.

The greatest single good that has resulted from this ordinance has been the finding of a number of food handlers, with venereal disease, who have presented cards on which examining physicians have marked "None," without making any examination, under all headings that refer to venereal diseases. In one case that came to my attention a waitress who brought in a family physician's report admitted that the doctor did not examine her, but just merely made out the card. I sent her back to her physician with instructions that the examination must be made or else we could not issue a "permit to work" card. She went back and he again sent her away without making the examination; but he called me before she got back to my office and said, "It is foolish to require an examination of this person. I have known the family for fifteen years and am sure there is nothing the matter with her." I informed him that I had been fooled a number of times by my friends, and that the only way to tell whether or not she had any disease was to examine her. I referred her back to him the third time, and he then examined her.

I previously recommended that all examinations of food handlers be conducted by the health department. This caused a reaction among a few of the local physicians, some of whom desire to make the examinations

* Read before the Health Officers' Section of the Kansas Public Health Association, April 11, 1922.

1. Gloyne, L. B.: A Preliminary Report on the Physical Examination of Food Handlers, J. Am. Pub. Health A., November, 1921, p. 963; M. Officer, January, 1922, p. 5.

because they feel that it is the right of the person examined to choose his physician and, also, because they need the income. These physicians are careful about making their examination. Other physicians do not desire to make the examinations, because they fear that something wrong will be found and that their honest reports will cause their patients to lose employment.

Our experience is not unique in this matter, because health departments in other cities, where family physicians make these examinations, are having similar experiences. It was recently stated[2] that:

> Our own occupational clinics, though they were not uniformly administered nor as favorably situated with respect to supervision, equipment and personnel as they might be, nevertheless made a showing which indicates that the private physicians are not all contributing conscientiously to the protection of the public health from food handlers, who may be affected with communicable diseases. . . . Since the examination of food handlers has been demonstrated to be an activity of the department which is of vital importance as a public health measure, it would seem to be necessary, in the interest of the public welfare, to discontinue delegating this important function to private physicians.

A long list of figures is usually uninteresting, but I want to refer to a few things that have been accomplished by this ordinance. In one restaurant, all of the waitresses were infected. A thorough investigation disclosed that waiting on tables was only a part of their occupation. We have been able to straighten out that place. Three colored waitresses and two colored cooks in an exclusive colored club had acute gonorrhea. Our work has cleared up that situation. In a rooming house where several waitresses lived, we found three of them infected. We found a boy, barely 14 years old, with a chancre. Twelve persons who were refused permits started treatment immediately and were later given cards when thought to be noninfectious. A baker who had a syphilitic ulcer on his shoulder required seven months' treatment before he was able to return to his usual occupation. I believe that he worked in a nearby city while under treatment.

To those who are studying the question of sex hygiene, sex education and the dissemination of information on prophylaxis, I would like to give the following information, purely from a medical, and not a moral, standpoint. We require all restaurant employers, grocerymen and druggists, if they are soda dispensers, to be examined. From a moral standpoint, I do not believe that the three groups vary widely. But among soda dispensers we found only one case of venereal disease, in a youth who had not been around a drug store long enough to learn the dangers of venereal diseases or about its prophylaxis. It is my opinion that the information these young fellows gather around the drug stores makes them fear venereal diseases, so that they live more continent lives, and that when they do break over, they use the knowledge that they have gathered on prophylaxis.

Of the three groups, grocery employees, restaurant employees and soda dispensers, the restaurant group stands out as most in need of attention. There is more shifting in that group than in any other. Less capital is required than in the other two lines. I have examined a number of persons who were in the restaurant business because they could not find anything else to do. They were entirely void of knowledge on sanitation. I believe that the next advance in improving the sanitation of our restaurants and other food establishments, and for seeing to it that food reaches the consumer in an uncontaminated condition, will be a mental test that will require the food handler to study certain sanitary principles before he tries to pass the physical examination. I have issued cards to a few persons of very low mentality. It was evident that they were not mentally capable of having the responsibility of preparing food for the public. Some of these I have stopped to talk to, and then questioned them after my little lecture. I found that my talk did not make the slightest impression. This group is composed, mainly, of men, beyond 60 or 65, who run some little place of business all by themselves. There have been two of these whose bodies were so dirty that I refused to issue a card to them until they went home and took a bath. It goes without saying that one who is so deficient mentally that he cannot take care of his own person is one that should not be trusted with handling the food of others.

While the examination of a large number of persons gives a somewhat monotonous task to the conscientious examiner, still the results obtained are well worth the amount of effort necessary to carry out the work, and I heartily recommend the adoption of this public health measure in any community in which it is not now applied.

2. Month. Bull. Dept. of Health, City of New York, September, 1921.

ACUTE STENOTIC LARYNGITIS SIMULATING LARYNGEAL DIPHTHERIA

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Under the diagnosis of laryngeal diphtheria, one may encounter in the admitting room of a diphtheria ward many forms of respiratory disease: acute stenotic laryngitis, bronchopneumonia, retropharyngeal abscess, foreign bodies, stenosis of upper respiratory tract due to various causes, postdiphtheritic paralysis, edema of the glottis, and even poliomyelitis (bulbar type). None of these, however, with the exception of acute stenotic laryngitis, present much difficulty in diagnosis. There is nothing particularly suggestive in such a history: The child has had some fever, a persistent "croupy" cough and some dyspnea. Perhaps antitoxin has been given; then, as the condition has not improved but grown worse, the patient is brought to the hospital in case intubation should be necessary.

In the milder forms of stenotic laryngitis, a differentiation is usually not difficult; yet even here one occasionally finds that the ordinary clinical methods are not sufficient. The barking cough, lack of aphonia and higher temperature are suggestive of stenotic laryngitis, but these may be present in diphtheria. If the pseudomembrane is confined to the aryepiglottic folds with but little extension of the inflammation downward, the voice may be perfectly good. In a series of 136 cases in which this point was carefully noted, aphonia was lacking in twenty-eight (20 per cent.). Again, in the severer forms of stenotic laryngitis, the voice may be as completely lost as in diphtheria. Of course, when there is evidence of diphtheritic exudate in the throat, the diagnosis is clear. It is well to note that a follicular exudate on the tonsils and a laryngitis may be due to the scarlet fever virus and not to the diphtheria bacillus. But it is in those cases in which no exudate

is seen above the larynx that the difficulty lies. Pharyngeal cultures are not to be relied on. In a series of 697 cases of laryngeal diphtheria, 245 (38 per cent.) showed nothing in the throat. Although the primary cultures taken directly from the larynx were positive for the Klebs-Loeffler bacillus in 85 per cent. of these cases, cultures taken from the throat were positive in only 50 per cent. It may be worth noting in this connection that a positive culture does not necessarily denote diphtheria. We have seen patients with laryngitis who gave several positive cultures from the larynx; the majority of these gave the negative Schick test, and none were given antitoxin. The positive cultures meant simply that the patients were carriers. In fact, one of these carriers was sent to us as such from a city hospital, two months later.

Cases of acute stenotic laryngitis as seen in the hospital may be divided usually into (1) those preceding a measles rash; (2) those preceding a scarlet fever rash; (3) those accompanying influenza, and (4) those arising from some infection of unknown origin.

It will be seen from this classification how important it is that acute stenotic laryngitis be differentiated at the outset from laryngeal diphtheria in order to prevent the possibility of mixed infections. In a series of 113 cases of laryngitis, five patients developed a measles rash in forty-eight hours, although at the time of admission no symptoms suggestive of measles, apart from the laryngitis, were present. During the winter of 1921 we saw several cases of laryngitis in which a scarlet fever rash developed in twenty-four hours. Some of these patients required intubation.

Direct laryngoscopy offers the best means of diagnosis in these cases and, while not infallible, reduces the limit of error to a small margin. Direct inspection of the larynx shows congestion and swelling of the aryepiglottic folds and arytenoids, swelling of the ventricular bands, reddened cords, and a greater or less

AGE AND SEX

	Stenotic Laryngitis	Laryngeal Diphtheria
Ages:		
Under 6 months	2	6
From 7 to 12 months	12	60
From 1 to 2 years	46	263
From 3 to 5 years	36	289
From 6 to 10 years	16	75
From 11 to 15 years	1	1
From 16 to 20 years	0	3
	113	697
Sex.		
Males	76	403
Females	37	294

degree of subglottic stenosis. In the severer forms, this subglottic stenosis is more marked than that usually encountered in diphtheria. The local inflammatory reaction is also more intense usually. The pseudomembrane is, of course, absent. It is the cases in which the membrane is so low down that it cannot be seen that present the greatest difficulty, but these are few. The passing of a culture swab into the larynx will frequently demonstrate the membrane.

Of 810 patients sent to the Willard Parker Hospital as having laryngeal diphtheria, 697 proved by direct examination to have diphtheritic laryngitis and 113, acute stenotic laryngitis. A membrane was demonstrated in all of the 697. Of the 113, none had a membrane; all had several negative cultures taken direct from the larynx; the greater number received from 1,000 to 2,000 units of antitoxin subcutaneously; ten were given no antitoxin, but the Schick test instead; all ten proved negative. Of these ten, two required intubation, one on the fourteenth day, the other on the twelfth day after admission. The former recovered; the latter died of pneumonia.

The age incidence of stenotic laryngitis is much the same as in diphtheria; this is shown in the accompanying tabulation. In both series, males predominated.

The number of intubations in the 113 cases was fourteen; of these patients, nine died of bronchopneumonia. Of the ninety-nine not intubated, five died of bronchopneumonia; in the remaining ninety-four in whom bronchopneumonia did not occur, there were no deaths.

Although many of these patients recovered in a few days, with some the dyspnea lasted from a week to ten days, in marked contrast to diphtheria; the croupy cough persisted from fourteen to eighteen days longer.

Recurrences of stenotic laryngitis are not infrequent. Some of these patients were brought to the hospital several times in the year. One in particular was known to have had six attacks in eighteen months, four being in the hospital; each attack lasted from two to three weeks.

Clinical Notes, Suggestions, and New Instruments

DOWNWARD DISLOCATION OF THE PATELLA

GUY AUD, M.D., LOUISVILLE, KY.

This case is reported because of the relative rarity of downward dislocation of the patella and the paucity of literature on the subject, rather than because of any particular difficulty encountered in reducing the dislocation.

REPORT OF CASE

G. W., a boy, aged 17, who had been hopping trains for years and had become expert at it, attempted to board a train said to have been moving at a rate of 25 or 30 miles an hour. He secured a firm grip with both hands, but missed his footing and was being dragged along with his legs flexed under him. Realizing that he could not get aboard and that the train was steadily gaining speed, he attempted to save himself by letting go and throwing his body free of the car-wheels. As he fell, severe pain was experienced in the left knee and he was unable to arise. He was immediately carried to the office of Dr. H. R. Nusz, Cecilia, Ky., who diagnosed the dislocation. An anesthetic was administered by Dr. Nusz and attempt made to reduce the dislocation, but this was found impossible without assistance.

On examination at St. Joseph's Infirmary four hours after injury, the leg was in a position of almost complete extension with inability to flex or extend it. There was a slight abrasion of the skin about 2 inches above the patella. The knee was greatly swollen and the patient complained of considerable pain, especially when the leg was moved. The patella was firmly fixed and formed an unusual prominence between the femur and the tibia. A roentgenogram revealed that the patella had been turned vertically through a right angle, the upper border being engaged between the femur and the tibia. There was no fracture of the patella, but the taut patellar tendon had partially torn loose the tuberosity of the tibia.

Under general anesthesia the dislocation was readily reduced by manipulation. With the thigh over the right shoulder of the operator, the leg was forcibly flexed, and at the same time traction was made on the leg. The patella readily snapped into position, the whole procedure requiring only two or three minutes. A posterior splint was applied. Because of the great amount of swelling and effusion into the joint, extension was applied twelve hours after operation. This was removed at the end of one week, and passive motion

was started. Three weeks after the injury there was only slight swelling, and, with the knee strapped, the patient was able to walk with no discomfort. Examination six weeks later disclosed complete recovery with no limitation of motion.

COMMENT

Since operation was not resorted to in this case, we can only speculate as to the character and extent of injury sustained by the joint structures. We know that such a dislocation occurs only when great force has been exerted downward and backward on the patella with the knee flexed. The patella cannot rotate through an axis of 90 degrees and engage its upper border under the condyles of the femur without either rupturing the powerful quadraceps extensor tendon or herniating through its posterior surface. The rapid and extensive swelling and effusion would indicate serious injury of the joint structures.

Careful search has failed to reveal an adequate description of this unusual dislocation. Most of the textbooks on surgery make no mention of it, while some merely state that such a dislocation of the patella is possible, but is secondary to serious injury of the quadriceps tendon and other joint structures. Perkin's[1] case is the only one reported in the journals of this country in recent years. Rutherfurd[2] of Glasgow reports three cases of his own and four other cases previously reported by Reichel. In all of these cases the leg was held rigid in a position of almost complete extension, probably owing to the tense patellar ligament. Open operation was the method employed in reducing all but two, in which cases the patella was dislodged by means of spikes driven into it for traction. In this case we were fortunate in being able to reduce the dislocated patella by manipulation, as described, but one can readily understand that this is not always possible.

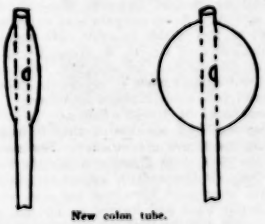
Atherton Building.

A NEW COLON TUBE

J. J. Brownson, M.D., Dubuque, Iowa

It has always been regarded as very difficult, if not unusual, to be able to pass the ordinary rectal tube up through the sigmoid into the colon.

In 1917, I devised the tube here illustrated. As the rubber industry was rushed with war orders, I was unable to have the tubes made, so I was forced to improvise them myself by taking the finger of a fresh rubber glove, and fastening on the ordinary tube.



New colon tube.

A glance at the picture will show how it works. When passing, if the instrument becomes blocked by the curve of the bowel, the fluid runs into the bulb and distends it. This pushes the inner wall of the intestine to one side and permits the introduction of the tube up into the descending colon. The bowel may then be filled with fluid, and the tube left in situ. Allowing the solution to run out permits the free passage of flatus through the tube, which seems to relieve that annoyance of after-treatment, gas pains.

As soon as some of our instrument makers perfect these principles in making the tube, and by using air to inflate the bulb when necessary, I believe it will be possible to get fluid above the ileocecal valve, so as further to relieve many cases of obstruction, intussusception and paresis.

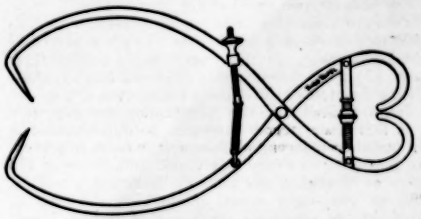
The clinical results with the tube have been excellent in the ten cases in which I have employed it, both in private practice and in consultation.

MODIFICATION OF KNEE EXTENSION APPARATUS

L. Ray Ellars, M.D., Louisville, Ky.

This modification of the ordinary knee extension apparatus has several advantages over the type ordinarily used:

1. The small tension spring keeps the points of the calipers in close contact with the bone at all times, thus eliminating



Modification of knee extension apparatus.

the possibility of their slipping or creeping if for any reason the traction should be momentarily released, as by accidentally striking the weights.

2. The adjustment keeps the points from penetrating the bone too deeply, as it allows the same pair of calipers a wider latitude of adjustment.

3. By means of this small tension spring, the caliper points are kept in contact with the bone while the ropes are being attached, thus eliminating the necessity of having an assistant. This is especially true when the calipers are being applied under local anesthesia, which is certainly the method of choice.

DIPHTHERIA OF THE MIDDLE EAR AS A PRIMARY INFECTION

Robert M. Blanchard, M.D., Fort Sheridan, Ill.
Lieutenant Colonel, Medical Corps, United States Army

A private, aged 22, white, admitted to the hospital Feb. 9, 1922, had had a bad cold in the head and a congested nose for two days and, on the day of admission, a discharge from the left ear. This discharge was not preceded by any pain or discomfort. The day after admission, the right ear began to discharge without any previous discomfort except fulness. On admission, all other objective symptoms, including those of the throat and larynx, were negative. The subjective symptoms were not marked, but the patient complained of being light headed, and had no appetite. The temperature on admission was 102.

Both ears continued to discharge freely and were treated daily in the ear clinic, with routine treatment of warm boric acid irrigations, phenol (carbolic acid) and glycerin packs, and alcohol cleansing. The condition remained unchanged for five days, with the temperature ranging from 101 to 103, and the patient growing weaker and very deaf. The ear drum at this time seemed to be covered with a sort of exudate not typical of the ordinary otitis media, and I was led to take cultures of the discharge from both ears. February 17, these were both reported positive for diphtheria bacilli, and 10,000 units of antitoxin was given. On the 18th the temperature had dropped to 99 and on the 19th was normal and remained so. By the 22d there was no discharge from the ears, the hearing had improved, and the patient felt very much better. By the 27th there had been two negative ear cultures and a negative throat culture, and the patient was discharged to duty, cured.

1. Perkins, J. W.: Hitherto Undescribed Dislocation of the Patella Endwise, J. A. M. A. 74:388 (Feb. 7) 1920.
2. Rutherfurd, H.: Downward Dislocation of the Patella, Brit. J. Surg. 8:524 (April) 1921.

AN APPARATUS FOR AIDING IN LUNG EXPANSION

HARRY S. IRVINE, M.D., AND J. EARL ELSE, M.D., PORTLAND, ORE.

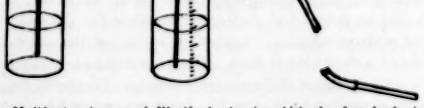
In the postoperative treatment of empyema, the securing of lung expansion is essential to ultimate cure. This is particularly difficult in those cases in which surgery has been so delayed as to allow collapse of the lung, thickening of its pleura, and the formation of adhesions.

The use of a closed system of drainage will at best only prevent pneumothorax. Even a successful negative pressure attachment to the drainage tube is not effective in expanding a collapsed lung which is bound by adhesions and thickened pleura.

Such a lung must be inflated by pressure from within. The Woulfe bottles are used to aid the patient in this inflating process. The modification here described has the advantages of (1) always being ready for use without refilling or changing by the nurse, and (2) providing a means by which the patient can note progress, in this way securing better cooperation.

The modification is, first, the use of a siphon between the two bottles, and second, the graduating of the first bottle.

The apparatus consists of two equal sized bottles fitted with two-hole stoppers. One short glass tube bent at right angles is fitted into each stopper. Each is also fitted with a right angle tube which is long enough to reach nearly to the bottom of the bottle, so that the siphon is not easily broken. The two long tubes are connected by rubber tubing. One of the short tubes is connected with a glass tube for a mouthpiece by a longer piece of rubber tubing. The first bottle is then nearly filled with water. The patient blows until the level of the water is just above the end of the siphon tube, and the water siphons back while the apparatus is not in use.



Modification in use of Woulfe bottles in which the first bottle is refilled by a siphon from the second while the patient is resting.

If both bottles are kept at the same level, the siphon equalizes the amount of water in both bottles. If the second bottle is elevated to a level higher than that of the first bottle, the patient may blow nearly all of the water into the former, and it will return to the latter while the patient rests.

The first bottle is graduated at 25 c.c. intervals either by markings on the glass itself or on adhesive tape applied to the side of the bottle.

The patient, trying to find how few breaths will be required to blow a certain amount of water from the first to the second bottle, will cause a persistent stretching of the pleura and adhesive bands. The motion of the pleura prevents the plastic exudate from forming new adhesions. The definite visible signs of improvement in expansion encourages the patient to work with the apparatus as much as is consistent with his strength.

Stevens Building.

Horsehair for Hypodermic Needles.—I have found horsehair (suture clippings) to be more effective than either brass or steel wire for keeping open the lumen of all kinds of hypodermic needles. As they are black, they are readily seen and picked up when wanted for reinsertion into the needles. They never rust, seldom break, and may be sterilized inside and along with the needles.—BENJAMIN A. DANIELS, M.D., Tampa, Fla.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

IOTHION. — Iopropane. — Di-Iodo-Hydroxy-Propane. — 1,3-di-iodo-propane-2-ol.—$CH_2I.CH(OH).CH_2I$. Iothion contains from 77 to 80 per cent. of iodine.

Actions and Uses.—Iothion is used when it is desired to obtain the systemic effect of iodides by external application. Iothion is absorbed from the intact skin. It is claimed to be practically unirritating to the skin in the concentrations ordinarily used, and to produce no discoloration.

Dosage.—Iothion is used in the form of iothion oil, in solution in alcohol or glycerin, or in the form of ointments containing from 5 to 20 per cent. of iothion. It is applied without friction, and the parts are not bandaged.

Manufactured by the Bayer Company, Inc., Rensselaer, N. Y. (Winthrop Chemical Company, New York, distributor).

Iothion Oil: Iothion, 10 parts; chloroform, 10 parts; olive oil, 80 parts.

Iothion is a yellowish, oily liquid having a faint but not unpleasant odor. It is insoluble in water; soluble in alcohol, ether, chloroform, carbon disulphide, glycerin and oils. It is volatile at body temperature. It is decomposed by alkalis and weakly alkaline solutions. The specific gravity is from 2.4 to 2.5 at 20 C.

Heat about 1 Gm. of Iothion, accurately weighed, on the water bath under a reflux condenser, with 25 Cc. of half normal alcoholic potassium hydroxide for from five to six hours. Dilute with water and evaporate the alcohol. Add a slight excess of dilute sulphuric acid and a few cubic centimeters of sodium nitrite solution, and extract with carbon disulphide until all of the iodine has been removed. Titrate the carbon disulphide solution with tenth-normal sodium thiosulphate in the usual way. The tenth normal sodium thiosulphate consumed indicates not less than 77 per cent. nor more than 80 per cent. of iodine.

TYPHOID VACCINE (See New and Nonofficial Remedies, 1922, p. 310).

Parke, Davis & Co., Detroit, Mich.

Typhoid-Paratyphoid Vaccine (Prophylactic).—Marketed in packages of three 1 Cc. bulbs, the first dose containing 500 million killed typhoid bacteria, 375 million killed paratyphoid A and 375 million killed paratyphoid B bacteria, the second and third doses each containing 1,000 million killed typhoid bacteria, 750 million killed paratyphoid A and 750 million killed paratyphoid B bacteria, respectively, suspended in physiological solution of sodium chloride and preserved with cresol, 0.3 per cent.; also marketed in packages of three 1 Cc. syringes, the first dose containing 500 million killed typhoid bacteria, 375 million killed paratyphoid A and 375 million killed paratyphoid B bacteria, the second and third doses each containing 1,000 million killed typhoid bacteria, 750 million killed paratyphoid A and 750 million killed paratyphoid B bacteria, respectively, suspended in physiological solution of sodium chloride and preserved with cresol 0.3 per cent.

PNEUMOCOCCUS VACCINE (See New and Nonofficial Remedies, 1922, p. 304).

Parke, Davis & Co., Detroit, Mich.

Pneumococcus Vaccine (4 Types).—A suspension of pneumococci, Type I, II, III and Group IV, in equal proportions in physiologic solution of sodium chloride, preserved with cresol 0.3 per cent.; each cubic centimeter contains 3,000 million killed bacteria. Marketed in packages of four 1 Cc. bulbs, four 1 Cc. syringes, 5 Cc. vials and 20 Cc. vials, respectively.

STREPTOCOCCUS VACCINE (See New and Nonofficial Remedies, 1922, p. 308).

Parke, Davis & Co., Detroit, Mich.

Streptococcus Vaccine Polyvalent (Scarlatina).—Marketed in packages of four 1 Cc. bulbs, each cubic centimeter containing 1,000 million killed streptococci isolated from scarlatina cases, suspended in physiological solution of sodium chloride and preserved with cresol, 0.3 per cent.; also marketed in packages of 4 Cc. syringes, in 5 Cc. vials and in 20 Cc. vials.

PERTUSSIS BACILLUS VACCINE (See New and Nonofficial Remedies, 1922, p. 303).

Parke, Davis & Co., Detroit, Mich.

Pertussis Vaccine.—Marketed in packages of four 1 Cc. bulbs, each cubic centimeter containing 4,000 million killed pertussis bacilli (Bordet) suspended in physiological solution of sodium chloride and preserved with cresol, 0.3 per cent.; also marketed in packages of four 1 Cc. syringes, in 5 Cc. vials and 20 Cc. vials.

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SATURDAY, MAY 13, 1922

CALCIUM REQUIREMENT OF HUMAN FETUS

It is a physiologic platitude that calcium is an indispensable element for the construction of a normal body structure. In the composition of the adult there is more lime than any other inorganic element. If the body weight is estimated at 70 kg. (154 pounds), the content of calcium will approach 1.4 kg., or about 3 pounds, of which nearly all is present in the bones. Such figures serve to emphasize the importance of lime in the economy of the human organism. Sherman [1] has made careful estimates of the metabolism of calcium from the numerous experimental data now available in the literature, and has reached the conclusion that an average of 0.45 gm. represents the daily expenditure under conditions of closely restricted calcium intake. This is presumably a minimal figure on which an average man can maintain equilibrium; and if one allows a 50 per cent. increase to secure an optimal intake, it would seem, according to Sherman, that the food of a family should furnish at least 0.67 gm. of calcium "per man per day." It is important to know that half of the American dietaries which have been studied with respect to their inorganic constituents show figures below this proposed optimum, while 15 per cent. of the recorded dietaries indicate the allotted daily food to yield even less than the 0.45 gm. adjudged to be a minimal figure.

Pregnancy and lactation make additional demands for lime. The recognition of this is expressed in the adage that "every child costs a tooth." In order to appreciate the quantitative aspects of the withdrawal of calcium from maternal sources for the development of the fetus, statistics of the composition of the latter at different stages of its formation are obviously needed. The data heretofore available have been somewhat scanty. Recently, however, Givens and Macy [2] have reported investigations of twenty-five fetuses ranging from 90 to 400 mm. in length and consequently varying from 3 to 8 lunar months in age. The large and rapid increments in size occur after the fifth month of uterine existence. Up to the third month the total calcium requirement approximates somewhat more than 200 mg. in all. According to Givens and Macy, for the first third of pregnancy the fetal demand for calcium varies from 7 to 20 mg. a day, whereas for the total period it may average 70 mg. or more a day. During the latter days of rapid intra-uterine fetal growth, the daily requirement must be far above this average figure.

The practical problem concerns the possibility of supplying the normal needs plus this fetal demand out of the mother's food intake. Sherman has ventured the statement that the "ordinary mixed diet" of Americans and Europeans, at least among dwellers in cities and towns, is probably deficient in calcium more often than in any other chemical element. Bread and meat, the two most popular ingredients of the American dietary, are decidedly poor in calcium. Indeed, it would be virtually impossible to consume enough of these articles of food to supply the estimated quota of lime without intolerable demands on the metabolic capacities of the body. In the use of milk lies at present the foremost prospect of a successful solution of the lime problem as outlined. A pint of milk—representing 300 calories or more—will itself furnish at least half a gram (500 mg.) of lime. Whether the pregnant mother can actually "assimilate" from her food the relatively large quantities of calcium requisite remains to be more definitely determined. However, it should be noted that the higher requirement does not end with parturition. Lactation, involving the secretion of a fluid rich in lime, makes a continued demand for an augmented daily maternal supply. Furthermore, if the abundant body store has for some reason become partly depleted, the loss deserves to be made good in due season. It is gratifying to have some new, accurate facts on which to base further considerations of the lime problem in the diet of pregnancy.

1. Sherman, H. C.: Chemistry of Food and Nutrition, New York, the Macmillan Company, 1918, p. 264.
2. Givens, M. H., and Macy, I. G.: The Calcium and Magnesium Content of the Human Fetus, J. Biol. Chem. 50:34 (Feb.) 1922.

THE CIRCULATORY COMPENSATION IN SEVERE ANEMIAS

There are many instances of anemias in man in which the oxygen-carrying capacity of the blood is enormously diminished. In some of the chronic forms of the disease, patients may continue to live with as little as one tenth of the normal amount of hemoglobin per unit of blood volume. With a somewhat larger content of hemoglobin they are likely to be comfortable and may sometimes be able to work to a slight extent. At any rate, signs of dyspnea are present only when there has been exertion. How the seemingly extreme degrees of reduction in the oxygen-carrying capacity of the blood—a decrease often far greater than is almost certain to bring symptoms of distress when the hemoglobin is exposed to carbon monoxid—are so well toler-

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ated in anemias has been somewhat of a physiologic puzzle. How, for instance, is anoxemia avoided in persons showing a normal oxygen consumption and an oxygen content per cubic centimeter of arterial blood less than half the amount normally abstracted in the capillaries for the processes of oxidation? Actual measurements on severely anemic patients give no basis for the assumption that their metabolism is slowed so that they require less oxygen than the normal person of comparable size. There is no increased pulmonary ventilation in such cases when exertion is avoided. Hence, as Hewlett [1] has clearly pointed out, the respiratory compensation in chronic anemias must lie either in the blood itself or in the rapidity of the circulation.

All the more recent evidence contradicts the idea that the hemoglobin in the blood of patients with anemia has any increased potency for carrying oxygen. The compensation against decreased content of respiratory pigment is therefore not due to some unique chemical character developed in the oxygen-carrying substance. The researches by Fahr and Ronzone [2] at the University of Wisconsin demonstrate clearly, on the other hand, that in severe anemias increased minute volume is the outstanding compensatory mechanism for the loss of oxygen-carrying power of the blood. In a case of severe pernicious anemia, for example, the increase amounted to 250 per cent., and the systolic output of the heart was augmented in the same degree. The augmented blood velocity is, of course, greatly facilitated by the lowered viscosity of the circulating medium due, in turn, to the reduction in the number of red corpuscles, which play a significant part in the normal resistance to flow in the vessels. Another factor may be an increased "effective cross section of the vascular tubing," for microscopic examination of the skin capillaries by Fahr and Ronzone showed that these vessels were contracted down to half the normal diameter or less, thus determining a lessened blood flow through the skin and a larger flow through other organs. It was also shown that the lessened quantity of blood in the skin is certainly one factor in the degree of paling of the skin.

Researches on the anemias show that the coronary circulation is at the upper limit of the possible, being about as large as that found in very severe work. Obviously, then, if such patients are not at rest, and additional effort is thrown on the heart already close to the margin of oxygen sufficiency for its musculature, the latter may readily suffer from anoxemia. It has been alleged that the pathologic changes in the heart muscle in pernicious anemia may well be due to lack of oxygen. At all events, the necessity for the complete rest of persons exhibiting severe anemias is emphasized beyond question.

1. Hewlett, A. W.: Functional Pathology of Internal Diseases, New York, D. Appleton & Co., 1917, p. 369.
2. Fahr, George, and Ronzone, Ethel: Circulatory Compensation for Deficient Oxygen Carrying Capacity of the Blood in Severe Anemias, Arch. Int. Med. 29: 331 (March 15) 1922.

THE ANTISCORBUTIC PROPERTY OF FOODS

Sherman and Smith, in their recent competent review [1] of the present status of the vitamins in science and practice, believe it safe to say, on the basis of our present knowledge, that a dietary selected to make the best use of our ordinary staple foods will give little occasion to purchase vitamins in any other form. Moreover, they indicate that it is not necessary to give any greater anxiety to the vitamins than to some other factors which enter into our present conception of nutritive requirements and food values. "When research in this field," they say, "brings us quantitative knowledge as to the efficiency with which vitamin C can be preserved in our staple fruits and vegetables when canned or dried, comparable with our present knowledge of the good preservation of vitamins A and B in cooked, canned or dried milk, it will become possible to plan food supplies, even for conditions in which fresh food cannot be obtained, with a similar degree of definiteness with reference to vitamins as to other nutritional needs."

It has become common knowledge that not only the traditionally used fruit juices but also many greenstuffs have considerable antiscorbutic potency, that is, they contain the so-called vitamin C. Some of the highly potent antiscorbutic foods, such as cabbage, turnips and tomatoes, are usually so readily available and so well tolerated that one need not search among more expensive products for protective material. The efficacy of the citrus fruits is widely recognized.

So much misconception and confusion exist, in the minds of those not specially conversant with the subject, about the effect of heat and culinary or preservative processes on the antiscorbutic vitamin that it is important to consider the latest findings as they are reported. The decrease in antiscorbutic potency that milk experiences on heating under certain conditions has too often been translated without reservation to all antiscorbutic foods and finally to all vitamins. Vitamin C is, in truth, much more readily destroyed than is vitamin B by both oxidation and heating, but the rate of destruction depends on a variety of conditions, including the duration of the heating, the opportunity for oxidative changes, and the reaction of the medium. These facts are reflected in the statement of the better preservation of "freshness" and antiscorbutic value in cold storage than in storage at ordinary temperature, and the serious loss of this property when food is kept hot for a long time between cooking and serving.

Givens, McClugage and Van Horne [2] have demonstrated anew the antiscorbutic property of raw bananas and apples, two fruits finding widespread favor in many parts of the world. As bananas are almost

1. Sherman, H. C., and Smith, S. L.: The Vitamins, New York, the Chemical Catalog Company, 1922.
2. Givens, M. H.; McClugage, H. B., and Van Horne, E. G.: The Antiscorbutic Property of Fruits, II, An Experimental Study of Apples and Bananas, Am. J. Dis. Child. 23: 210 (March) 1922.

invariably eaten raw in this country, no significant problem of deterioration of vitamin potency arises in connection with them. This is not equally the case with apples, which are consumed in a considerable variety of conditions. According to the latest evidence, such application of temperature as is ordinarily employed in preservation by desiccation or canning tends to reduce the amount of antiscorbutic vitamin of the original raw apple markedly. This is a practical fact of importance. We must learn not only where vitamins may be found in our common foods but also the conditions under which they are preserved intact.

PHYSIOLOGIC GLYCOSURIA

When the urine of healthy persons is examined by refined and delicate methods of analysis, the presence of a certain amount of carbohydrate substance is almost invariably indicated. It is not sufficient in quantity to be readily revealed by the usual tests which clinicians employ in their routine examinations; nevertheless, experience has led to a consensus among trained biochemists regarding the presence of what is generally designated by the somewhat indefinite term sugar. Regarding the actual quantities of such products which pass through the kidney, there is considerable divergence of opinion; but the inference has seemed clear that the renal mechanism is not absolutely impermeable to sugar, even in admitted conditions of perfect health. The presence of a "minute trace" of sugar would thus appear to be a physiologic or normal circumstance; and, accordingly, glycosuria is in a sense an ever-present phenomenon. In order to avoid this term, S. R. Benedict [1] has introduced the expression "glycuresis" to express an increase of sugar elimination above that commonly found in "normal" urine.

It is usually believed at present, at least by clinicians, that there is a definite renal "threshold" for sugar, particularly glucose which has formed the subject of primary concern because it is the sugar of both the blood and diabetic urine. This threshold represents the concentration of sugar in the blood above which glucose appears in the urine. Why the "permeability" of the kidneys for sugar should hinge upon a definite concentration of the carbohydrate in the blood has never been clearly explained except by fantastic analogies; nor has it been clear why the renal threshold should "shift" under varying physiologic or pathologic conditions. In current discussions of sugar metabolism, the authorities have been wont to speak glibly of sugar "assimilation," "tolerance," "thresholds" and the like, without offering any really clear explanation of precisely what is meant. Meanwhile a large number of important experimental facts have been accumulated; and despite whatever may become of the vague hypothesis and indefinite vocabulary, the facts will remain as a permanent basis for progress in understanding.

It is a fact that glycuresis of varying degrees may be encountered after the ingestion of foods of different sorts, particularly carbohydrates. It has been intimated that the quantitative increases in the sugar elimination, measured in milligrams and encountered in supposedly normal persons, is qualitatively or in origin of the same nature as is the clinical elimination of sugar in diabetes. In fact, it has been suggested that the difference between the normal and the diabetic individual may be wholly a quantitative one, just as is that between the mild and the severe case of diabetes. An elaborate study of the transportation, retention and excretion of carbohydrates in man by Folin and Berglund [2] has justified the belief that definite glycuresis, in the sense first indicated by Benedict, occurs after every ordinary carbohydrate meal. The novelty in these investigations lies in the conclusion that glycuresis is independent of the level of the blood sugar, and is not normally obtained from the ingestion of pure glucose, maltose, dextrin or starch. The transition from below to above the renal threshold appears to be so sharp and decisive that there is virtually no intermediate stage represented by glycuresis.

According to Folin and Berglund, glycuresis represents the absorption and excretion of foreign unusable carbohydrate materials present in grains, vegetables and fruits, and decomposition products due to the cooking, canning and baking of such food. If it shall prove to be correct that the sugar of "normal" urine consists of "a motley variety of carbohydrate products and carbohydrate derivatives," including disaccharids and polysaccharids, it seems justifiable to conclude, with the discoverers, that the escape of such miscellaneous unusable carbohydrate material into the urine has no connection with the main carbohydrate metabolism, and, therefore, none with the various problems of diabetes, except with reference to the correct interpretation of weak but positive tests for sugar in the urine.

These findings present certain problems of practical importance. If the foreign carbohydrates concerned in glycuresis may become sufficiently abundant to give positive clinical tests for sugar, how are they to be differentiated from true increments of glucose in the urine? The analytic solution remains to be offered, though the prospect of success does not seem to be imminent. Whether the "foreign" carbohydrates which are commonly eliminated by glycuresis have any physiologic or pathologic significance remains to be ascertained. Folin and Berglund assert that, although the absorption and excretion of foreign carbohydrates is to be sharply separated from the main carbohydrate metabolism, it does not necessarily follow that the

1. Glycuresis Versus Glycosuria, editorial, J. A. M. A. 72:1772 (June 14) 1919; Renal Glycosuria, ibid. 74:180 (Jan. 17) 1920.

2. Folin, O., and Berglund, H.: Some New Observations and Interpretations with Reference to Transportation, Retention and Excretion of Carbohydrates, J. Biol. Chem. 51:213 (March) 1922.

precursors of the virtually inescapable sugar of normal urine can be dismissed as of no importance. There is no reason to doubt that these products are absorbed from the blood by the tissues as readily as galactose, lactose and "dextrin." And the constant harboring of such foreign products in all the tissues of the body may very well be the cause of at least some minor disorders. As long as the etiology of so many skin and joint troubles remains unknown, they continue, one cannot entirely dismiss the fact that the human organism is constantly charged with impurities of vegetable origin. Even if this tentative hypothesis seems somewhat gratuitous in the light of the available scanty information, the recognition of the lessons of anaphylactic sensitizations warns us to be prepared for novel findings in this field of study.

Current Comment

UNUSUAL FEATURES OF THE ST. LOUIS SESSION

When the American Medical Association meets in St. Louis on May 22, it will have an opportunity to visit an exhibit of unique character. The Missouri Botanical Garden has reproduced the famous old Chelsea, England, physic garden established in 1673. There will be displayed seventy-two families, 160 genera and more than 200 species of plants, herbs and flowers from which various drugs are derived. The plan of planting was taken from the survey made in 1753 of the old English garden, and the work was done by vocational pupils of the War Veterans' Bureau in the school for gardening. Among other arrangements made by the Botanical Garden are exhibits of the pathology of plants and rare orchids and other flowers. The adaptation of the cinematograph to medical teaching will also have a thorough demonstration at St. Louis. A continuous motion picture and lecture program for the five days of the session will embrace all of the various medical subjects to which motion picture art has been adapted, including operative technic, and even the application of the slow motion camera to the recording of movements. The location of this session and the intense interest taken by the local profession assure a most successful meeting.

CLINICAL SPIROMETRY

Whenever accurate measurement can be applied to physiologic functions with ease under a variety of conditions, progress in clinical diagnosis is likely to ensue. Whether by the measurement of body temperature, the determination of the rate of the heart beat, the estimation of the urea or sugar content of the blood, the enumeration of its corpuscles, or the evaluation of the basal metabolic rate, in each case the establishment of something fairly definite instead of something conjectural about the organism has meant helpfulness in many instances of uncertainty regarding the existence of pathologic conditions. Recently the determination of vital capacity has gained new significance by the accumulation of evidence that healthy persons tend to conform in this respect closely to definite standards. Departures from these indicate the presence of pathologic conditions, as has long been known in the conspicuous cases of diminished lung capacity in patients with cardiac and pulmonary disease. The probability that clinical spirometry will gain increased significance in the near future is suggested by the recent work of Wilson and Edwards.[1] They conclude that the measurement of vital capacity is a fairly constant procedure in the case of children, that it should be recorded on routine physical examination, and that a reduction of 15 per cent. below the average normal should signal a child out for further physical and roentgenographic investigation. Somewhat the same inference may be drawn from the data secured by Hewlett and Jackson[2] from college students. The chief problem has resolved itself for the present into a determination of what norms or correlations of vital capacity with other bodily factors shall be selected to express the results. Before long we may expect to find the procedures of spirometry carefully standardized, as they now are in many other fields of clinical diagnosis.

WAS THE CENTURY COMPANY NAPPING?

On another page[3] we publish a criticism of a book recently issued by a high-grade and old-established house, the Century Company. The book is written by an individual connected with an organization that sells expert service in the general field of industrial chemistry and chemical and electrical engineering. The writer of the book seems to be in charge of that part of the organization that is devoted especially to the problems that arise in the "patent medicine" and allied industries. If the intent of the book is to let the "patent medicine" interests know that its author views the nostrum business from a tolerant, not to say sympathetic angle, it fulfils its mission excellently. If it is written as an expression of gratitude to the "patent medicine" business—some cynic has described gratitude as "a lively sense of benefits to come"—it again must be viewed as a good job well done. But the surprising thing is that the Century Company should have published it. The volume is the fourth of a series of "Books of Useful Science" published by this company. Much of the information it contains is valuable and interesting. Its view of the "patent medicine" business, however, a business which thoughtful students of the problem know to be fraught with harm to the health of the community, seems distorted and misleading, especially by the suppression of that which is true. The picture it gives seems drawn in the interest of the "patent medicine" industry rather than in the interests of the public. How did the Century Company come to put its O. K. on that part of "The Story of Drugs?"

1. Wilson, May G., and Edwards, D. J.: Diagnostic Value of Determining Vital Capacity of Lungs of Children, J. A. M. A. **78**: 1107 (April 15) 1922.
2. Hewlett, A. W., and Jackson, N. R.: The Vital Capacity in a Group of College Students, Arch. Int. Med. **29**: 515 (April) 1922.
3. "An Apologist for 'Patent Medicines,'" page 1476.

Association News

ST. LOUIS SESSION

Identification Certificates Required

In order to purchase special rate round trip tickets to St. Louis it is necessary to deposit with the ticket agent at the point of purchase a special "identification certificate." A pocket card establishes the fact that the holder is a Fellow in good standing in the Scientific Assembly of the American Medical Association, but the ticket agent, in order that he may sell a special rate railroad ticket, must have deposited with him an order from the passenger associations authorizing him to sell the desired excursion ticket; consequently, those members of the organization who desire to avail themselves of the special railroad rate should write immediately to the secretary of the American Medical Association, 535 North Dearborn Street, Chicago, requesting that the necessary identification certificate be mailed to them. Each such request should be accompanied with a self-addressed, stamped envelop to facilitate the forwarding of the identification certificate.

Medical Historical Exhibits

LIBRARY OF ST. LOUIS MEDICAL SOCIETY

The physicians of St. Louis are arranging for a Medical Historical Exhibit, which will be displayed on the second floor of the Library of the St. Louis Medical Society, 3525 Pine Street. A similar exhibit was arranged at the time of the St. Louis meeting in 1910. That exhibit was visited by large numbers who evidenced great interest in it.

LIBRARY OF WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

There will also be an exhibit in the Library of the Washington University School of Medicine, Euclid and Kingshighway, of classics in anatomy and surgery, selected from a large collection of writings belonging to that library. In addition, there will be displayed the Beaumont collection of manuscripts which is in the possession of the school.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST; SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CALIFORNIA

Physician Guilty of Murder.—It is reported that Dr. Joseph Valentine Studer, formerly of Peoria, Ill., was found guilty of manslaughter, April 5, in the superior court, Los Angeles, and sentenced to from one to ten years in the San Quentin prison. He was convicted on a charge of murdering his mother.

Pacific Coast Association of Anesthetists.—This association will hold its first scientific session as a joint meeting with the Section on anesthesiology of the California State Medical Society, at Yosemite, May 15-16, under the presidency of Dr. George P. Waller, Los Angeles. Dr. Albert J. Scholl, Jr., Rochester, Minn., will be one of the principal speakers.

CANAL ZONE

Cornerstone of Gorgas Memorial.—It was officially announced, April 18, that the cornerstone of the Gorgas Memorial Institute of Tropical and Preventive Medicine, Panama, will be laid, July 2, 1923.

COLORADO

Public Health Institute.—It has been announced that the public health institute which was to have been held in Denver this month, under the auspices of the U. S. Public Health Service and the state board of health, has been canceled.

Personal.—Dr. Harry A. Smith, Delta, president of the Colorado State Medical Society, recently underwent an operation in Cleveland.——Dr. Frank E. Palmer, Sterling, sailed from New York City, April 25, to attend clinics in Europe.

CONNECTICUT

Smallpox in the State.—The smallpox situation in Connecticut has become so serious that Dr. John T. Black, commissioner of public health, has requested the governor that a conference of all county health officials, the state council of health and the state board of education be called, to consider measures to be taken to arrest the course of the disease, which has become epidemic. It was announced that not one vaccinated child has had smallpox, but that ninety-four unvaccinated children contracted the disease.

DISTRICT OF COLUMBIA

Occupational Therapy.—The District of Columbia Occupational Therapy Association opened an exhibit in Washington, April 24-29, for the purpose of bringing before the public and medical profession the work of occupational therapy accomplished in the various hospitals and institutions throughout the city.

FLORIDA

Health News.—Resolutions have been adopted by the Duval County Medical Society for the inauguration of an annual week of clinics for physicians and surgeons of Florida and south Georgia. The first meeting under this arrangement will be held, June 7-10. These clinics will be conducted by the staffs of the local hospitals under the direction of the medical society.——A health campaign among employees of the Florida East Coast Railroad, through arrangement with the Flagler system and the U. S. Public Health Service, will be conducted this spring. The campaign will extend throughout the entire system and will consist of the distribution of pamphlets, posting of bulletins and placards, confidential interviews with employees, free lectures, examination and other forms of health protection.

ILLINOIS

Honor for Physician.—Dr. Tullie Van Boyd, East St. Louis, who served as a major during the World War at Castel Franco, Italy, has received the Italian Order of St. Marco and St. Lazarus.

New Public Health Nursing Services.—Definite arrangements have been completed for installing new or additional public health nursing services at Carbondale and Murphysboro in Jackson County, at Anna in Union County and at Harrisburg in Saline County. A similar service has been decided on for the rural territory in Jackson County, while Saline County has the proposition under serious consideration.

Mount Vernon Branch Laboratory Discontinued.—Dr. Wilbur H. Gilmore, who for a number of years has conducted a branch diagnostic laboratory for the state department of public health at Mount Vernon, has removed to Benton, where he will devote his entire time to roentgen-ray work. As a result, the branch laboratory at Mount Vernon is temporarily discontinued. Plans are under way, however, to reestablish a branch diagnostic laboratory for the southern part of the state at Mount Vernon, Centralia or Carbondale.

Drainage of Mosquito Breeding Territory Planned.—At a meeting in Chicago, May 2, between representatives of the state department of public health, the Illinois Central Railway Company, and the U. S. Public Health Service, it was agreed that the Illinois Central Railway Company would actively cooperate in the proposed plan for draining a large area of territory in the vicinity of Carbondale, for the purpose of destroying the breeding places of malaria carrying mosquitoes. Eight thousand dollars was the estimate of the probable cost of the undertaking made by the railway engineers, and provision was made that the state department of public health should handle all matters involved in obtaining ditching rights through private property.

County Medical Societies Meet.—The Jackson and Saline County Medical societies recently held special meetings at Carbondale and Harrisburg, respectively, for the purpose of discussing public health problems and policies with representatives of the state department of public health. Subjects brought up for consideration embraced the reporting of births, deaths and cases of communicable diseases, urban, school and rural public health nursing services and the public health duties of practicing physicians to individual families, to the community and to the state. Along with these topics, the subject of state medicine was brought up, and it was made clear to the physicians present that the state department of

public health is definitely opposed to state medicine in any form. It was further pointed out that the policy of the department of health is to develop a mutual, positive cooperation with the practicing physician. As a result of the meetings, the policies of the state department of public health, as established by Dr. Isaac D. Rawlings, director, were unanimously endorsed by the two societies. Both meetings were well attended. Drs. Thomas H. Leonard, Peter S. Winner, Clarence W. East and Elizabeth B. Ball discussed public health from the point of view of the state department of health, while every member present had something to say from the standpoint of the medical profession.

Chicago

Illinois Historical Society.—Dr. Otto L. Schmidt was elected president of the Illinois Historical Society, May 5, at Springfield.

Physician Fined.—A newspaper item states that Dr. Isaac Albright, Chicago, was recently fined $250 and costs for violation of the Harrison Narcotic Law. It was charged that Dr. Albright had received nearly $2,000 from three persons during eighteen months, through illegal sales of drugs.

Medical Value of the Cinematograph.—The Commonwealth Fund of New York City has contributed $10,000 in order to obtain scientific data on the value of moving pictures for use in teaching, and for the systematic study of the educational value of various kinds of pictures, the data to be gathered by Prof. Frank N. Freeman, University of Chicago.

Institute of Medicine Holds Meetings.—On May 10 the Institute tendered an informal dinner to Sir Thomas Lewis. ——On May 12 the Institute and the Chicago Society of Medical History held a joint meeting at which Prof. James H. Breasted of the University of Chicago read a paper on "The Edwin Smith Medical Papyrus, the Oldest Medical Book in America." Dr. L. L. McArthur, representing the Fenger Memorial Association, delivered an address on "The Life and Works of Christian Fenger."

INDIANA

New Appointments.—At the reorganization meeting of the state board of medical examiners, Dr. Jesse W. Bowers, Fort Wayne, was elected treasurer of the board, to succeed Dr. Paul R. Tindall, Shelbyville; Dr. William T. Gott was reelected secretary.

LOUISIANA

State Association Purchases New Orleans Medical and Surgical Journal.—The Louisiana State Medical Association announces that it has purchased the *New Orleans Medical and Surgical Journal*, utilizing in part funds accumulated for the entertainment of the American Medical Association in 1920. At the annual meeting of the Mississippi State Medical Association it was voted to accept this publication as the official journal of that society.

MAINE

Personal.—Dr. Clarence C. Little, research associate in the station for experimental evolution of the Carnegie Institute, has been elected president of the University of Maine, Orono, to succeed Col. Frederick Hastings Strickland. Major Little was formerly assistant dean and research fellow in genetics for the cancer commission of Harvard University, Boston. ——Dr. Charles W. Bell, Strong, has been appointed medical examiner for Franklin County.——Dr. Edward H. Nichols, surgeon-in-chief, convalescent department of the Boston City Hospital, Boston, spoke on "Head Injuries and Fractures" at a recent meeting of the Androscoggin County Medical Association at Lewiston.

MARYLAND

Bureau of Child Hygiene.—The Bureau of Child Hygiene, to be organized in accordance with provisions of the Sheppard-Towner law and legislation passed by the last general assembly of Maryland, will start with a personnel consisting of a director and ten graduate nurses, under plans formulated by Dr. John S. Fulton, secretary of the state department of health. The plans are preliminary in character, and the plan for the permanent organization will be prepared with the advice of the man chosen to direct the work. Headquarters of the bureau will be in Baltimore. The nurses will be distributed through the state, rather than kept in groups.

Reunion of Medical Alumni Association.—A reunion of the Alumni Association of the Johns Hopkins Medical School was held, May 5-6, in Baltimore. Following business meetings, clinical demonstrations were conducted by Drs. William S. Halstead, Howard A. Kelly, John M. T. Finney and Hugh H. Young. The officers reelected were: Dr. Thomas R. Brown, president; Dr. Walter Steiner, secretary, and Dr. J. Albert Chatard, treasurer. Plans for a new club for graduates of the Johns Hopkins Medical School were discussed and arrangements made for the opening of a club on Broadway, near the hospital. This club is to be used as a gathering place for visiting physicians and alumni and will be opened in a few months.

MASSACHUSETTS

Hospital News.—The Carter Memorial Hospital, Clinton and Lancaster, will be altered for obstetric service.——A drive for $50,000 is being conducted to build an addition to the Metcalf Hospital, Winthrop, and convert it into a community hospital.——A hospital for disabled veterans will be erected at Boston.

Cardiac Clinics.—The Boston Association of Cardiac Clinics will hold a meeting at the Children's Hospital, May 18, at which Dr. Louis I. Dublin of the Metropolitan Life Insurance Company, New York City, will give an address on "Heart Disease in the Community," and Dr. Paul W. Emerson, Boston, will speak on "Heart Disease in the Schools."

Industry and Health.—The division of industrial hygiene of Harvard University, Boston, is making studies of the health hazards of industry to ascertain fundamental facts as to the relation between industrial jobs and ill health. The aim of the investigation is to discover how dangerous certain dusts are and whether they can possibly cause death.——The industrial hygiene department of the Massachusetts General Hospital has opened an industrial clinic where they will study cases of industrial toxications, poisoning from inhalation of dust, fatigue of special groups of muscles, etc., as the patients come into the hospital. This department has also lately conducted a study of the health of the employees of twenty-five department stores in Boston, New York and other cities.

Tuberculosis Investigation.—A report has recently been submitted by the committee of the National Tuberculosis Association giving the result of an experiment carried out in Framingham for the purpose of ascertaining the possibilities of controlling tuberculosis in an industrial district. This work was started in 1916 with the financial aid of the Metropolitan Life Insurance Company. In five years the death rate from tuberculosis alone in this community of 18,000 population has dropped 67 per cent. Public health clinics and school clinics were established, and infant mortality dropped 22 per cent. From 121 per 10,000, an average for ten years preceding the experiment, it dropped to 40 per 10,000, in 1921. During the first year of the work, examination of tuberculous persons revealed that 45 per cent. were in the earlier stages of the disease, and 55 per cent. were in advanced stages. At the end of the five years' work, investigation of suspected cases revealed that 83 per cent. of the patients examined were in the early stages of the disease.

Personal.—It is reported that Dr. Arthur V. Goss has resigned as superintendent of the state hospital at Taunton after twenty-eight years of service.——The governor has nominated Dr. Royal P. Watkins, Worcester, for the position of member of the board of registration in medicine for the vacancy made by the resignation of Dr. Michael F. Fallon. ——Dr. Neil A. Dayton, Westboro, has been appointed senior assistant physician at the Wrentham State School, Wrentham. ——Dr. Edwin A. Leavitt, Worcester, is at the City Hospital recovering from a severe attack of uremia.——Dr. Alfonse P. Gagnon has been appointed tuberculosis diagnostician of the board of health and chief of staff of the Bayview Hospital, to succeed the late Dr. Ambrose A. Keeley.——Dr. Lewis F. Baker, Fitchburg, was elected president of the Worcester North District Medical Society, April 26, to succeed Dr. Richard S. Ely, West Townsend.——Dr. William S. Quinland, assistant pathologist, Peter Bent Brigham Hospital, Boston, has been appointed professor of pathology at Meharry Medical College, Nashville, Tenn., the appointment to become effective, September 1.

MICHIGAN

University News.—Dr. Louis M. Warfield has been appointed to the chair of internal medicine at the University of Michigan Medical School, Ann Arbor. Dr. Warfield is a graduate of Johns Hopkins Medical School, and was formerly resident physician in the service of Sir William Osler.—— A loan fund of $10,000 has been presented to the regents of the University of Michigan, to be known as the J. B. and

Mary H. Davis Trust Fund, in memory of Prof. J. B. Davis and his wife.——A gift of twenty valuable paintings in oil and pastel has been received from Jean Augustus Wettmore of New York City.

Personal.—Dr. Willis A. Dewey, University of Michigan Medical School, Ann Arbor, will resign from the university in June, and will spend a year in France and Italy.——Dr. Charles McClelland, Detroit, gave a lecture recently in the Wayne County Medical Building on "Conservation of Vision."——Dr. Rudolph H. Lambert, Battle Creek, has been named tuberculosis expert of the Rehabilitation Division of the Eighth District, U. S. Veterans' Bureau, Chicago.——Dr. Ray S. Dixon, Detroit, has been appointed health officer of Flint, to succeed Dr. William De Kleine, who resigned recently. ——Dr. Hugh Cabot, dean of the University of Michigan Medical School, Ann Arbor, spoke on "Surgery" before the annual clinic of St. Rita's Hospital, Lima, Ohio, recently.

MINNESOTA

Physicians Elected to Mayoralty.—Dr. Aaron E. Henslin has been reelected mayor of Leroy; Dr. Henry B. Grimes was recently elected mayor of Madelia, and Dr. Andrew J. Gilkinson, mayor of Osakis.

Death of Dr. Northrop.—Prof. Cyrus R. Northrop, president emeritus of the University of Minnesota Medical School, Minneapolis, died suddenly, April 4, from heart disease, while sitting in his chair at home.

Personal.—Dr. Paul I. Carman was recently elected an honorary member of the Röntgen Society of London.——Dr. Wilson A. Allen, Rochester, recently celebrated his eighty-eighth birthday and his fifty-seventh year of active practice. ——Dr. George B. Weiser, New Ulm, was elected president of the state board of medical examiners, April 19, at St. Paul, to succeed Dr. Ida Mackeen.

Workman's Compensation Act.—The supreme court recently confirmed a decision of the county district court that, when a workman signs a release from benefits which he is entitled to under the Workman's Compensation Act, relying on the advice of a physician that recovery will soon be effected, and further trouble sets in as a result of the original injury, he is entitled to additional compensation.

University News.—Steps to create a new department of preventive medicine and public health and to institute a dormitory system for men at the University of Minnesota were taken, April 26, by the board of regents of the university. The new department will take over the present university health service and will offer elective courses, open to students in all the colleges, beginning in the autumn. The sum of $10,000 will be used to equip four frame houses recently purchased for $35,000 for housing forty men. This, it was announced, is the beginning of what eventually will be an extensive system of dormitories on the university campus.

MISSISSIPPI

Mississippi State Medical Society.—At the annual meeting, this week, Dr. S. W. Johnson, Vicksburg, was elected president, and Dr. Henry Boswell, Sanatorium, delegate to the American Medical Association. A committee of five was authorized to negotiate with the Louisiana State Medical Society with regard to the establishment of an official journal. There was an excellent attendance, and the entertainments at Brownswells were enjoyable. The meeting next year was awarded to Jackson.

MISSOURI

University News.—The following have been appointed instructors in the St. Louis University School of Medicine, St. Louis: Dr. George Gellhorn, professor of obstetrics and gynecology and director of the department; Dr. William Kerwin, instructor in gynecology; Dr. William E. Sauer, professor of ear, nose and throat diseases; Dr. John Green, Jr., associate professor of ophthalmology; Edward H. Higbee, assistant professor of ophthalmology; Drs. Harry S. Hughes, Edward C. Spitze, Harvey D. Lamb, instructors in ophthalmology; Drs. Otto V. Lieb, Roy E. Mason and Hugo Reim, assistants in ophthalmology; Dr. Richard Kring, assistant in dermatology; Dr. Harry Sandperl, assistant in surgery; Dr. Ulysses Eugene Hartley, assistant in genito-urinary diseases; Drs. Benjamin G. Haumesser and Louis W. Schreiber, assistants in medicine.——A new chemistry building will be erected at the University of Missouri, Columbia, at a cost of $125,000.——It is reported that Dr. George Dock has resigned his position as professor of medicine at Washington University Medical School, St. Louis.

MONTANA

Investigation of Tick Fever.—Dr. Roscoe R. Spencer, U. S. Public Health Service, has been assigned to the laboratory at Hamilton, to investigate the causes, mode of transmission, and prevention of Rocky Mountain spotted or tick fever, which has prevailed for some time in the Bitter Root Valley of the state.

NEBRASKA

Professor Resigns.—Dr. Arthur D. Dunn has resigned as professor of medicine and clinical medicine at the John A. Creighton Medical College, Omaha, and from the staff of St. Joseph's Hospital, effective June 1.

Physicians Elected to Mayoralty.—Dr. John P. Gilligan, O'Neill, former president of the Nebraska State Medical Association, has been elected mayor of O'Neill.——Dr. Frank L. Frink, Newman Grove, was reelected mayor of that city at the April election.

NEW MEXICO

Health Officers Hold Session.—At the meeting of the New Mexico Health Officers' Association at Albuquerque, April 27, Dr. Samuel D. Swope, Deming, was reelected president of the association, and Dr. George S. Luckett, director of the state bureau of public health, was elected secretary.

State Medical Meeting.—At the fortieth annual session of the New Mexico Medical Society, held at Gallup, April 28-29, under the presidency of Dr. Chester Russell, Artesia, the following officers were elected for the ensuing year: Dr. Harry A. Miller, Clovis, president; Dr. George S. McLandress, Albuquerque, president-elect; Drs. T. E. Pressley, Roswell, Jesse G. Holmes, Alamogordo, and Samuel L. Wilkinson, Belen, vice presidents, and Dr. John W. Elder, Albuquerque, secretary-treasurer. Dr. John W. Elder was chosen as associate editor of *Southwestern Medicine*.

NEW YORK

Bogus Physician Sentenced.—It is reported that Joseph Gold, also known as "Doctor" Walker, was sentenced to five years in Sing Sing Prison, by Judge Bleakley, at White Plains recently, on a charge of grand larceny. It is stated that Gold deceived a number of women by posing as a specialist and asserting that he was a physician in search of a mansion suitable for a sanatorium.

Public Health Institute.—The U. S. Public Health Service, in cooperation with the New York State Department of Health, conducted a series of venereal disease clinics in Albany, April 18-21. These clinics were conducted by Dr. John A. Fordyce, New York City; Dr. Henry H. Hazen, Washington, D. C.; Dr. Grover W. Wende, Buffalo; Dr. Isadore Rosen, New York City; Dr. Edward L. Keyes, Jr., New York City, and Dr. Guy L. Hunner, Baltimore.

Physicians' Suit Dismissed.—It is reported that a $50,000 damage suit brought against Dr. Addison S. Boyce and Dr. Gertrude G. Mack, both of New York City, Dr. Cornelia Brant, Brooklyn, and Dr. Sara Smalley, Newark, N. J., by Dr. William Dieffenbach, president of the board of directors, Community Hospital, New York City, for alleged libel, was dismissed recently by a Nyack jury. The Community Hospital was formerly the New York Medical College and Hospital for Women.

Funds for Graduate Education.—The New York Association for Medical Education of New York City is endeavoring to raise $3,000 from the medical profession in order to establish a centralized control of the various graduate medical schools and individual graduate courses available in New York City. The raising of the $3,000 will bring an additional $12,000, which has been promised by the Carnegie Corporation. Members of the medical profession certainly cannot allow such an opportunity to pass.

Personal.—Dr. Stephen H. Curtis has been appointed director of the bacteriologic and pathologic laboratory at the Leonard Hospital, Troy.——Dr. Collie J. Robinson, Northville, has been appointed health officer of Benson. Dr. Robinson is also health officer of Northville and Northampton.—— Dr. Edward T. Delehanty, Albany, has been appointed physician to the Albany jail.——Dr. Linsly R. Williams, director of the Rockefeller Commission on the Prevention of Tuberculosis, in France, has been appointed managing director of the National Tuberculosis Association.

Lack of Rural Physicians.—According to a recent issue of the *Health News*, the problem of finding physicians for rural

communities is a matter of growing concern. In some parts of the state, particularly in the Adirondacks, there are no physicians within a radius of 25 or 30 miles. Within four years, ninety-two rural towns and villages in New York State have asked the state department of health to help them secure physicians, and, although every effort has been made, the vacancies have been filled in only sixty-two cases. The state health commissioner points out that, although $130,000 has been appropriated by the state for the protection of maternity and child life, it is useless to talk about child welfare in those regions where there are no doctors, nurses, or hospitals. It is suggested that any moderate sized town should be able to support a small hospital, with laboratory, clinics and nurses, and consultation and diagnostic facilities, as well as it supports a community high school.

New York City

Eyesight Tests.—On health day in the public schools of New York City, the Eyesight Conservation Council of America tested the eyes of nearly a million children, and distributed 50,000 copies of a pamphlet on the conservation of vision.

NORTH CAROLINA

Public Health Association.—At the annual meeting of the North Carolina Public Health Association, in Winston-Salem, April 24, Dr. Alexander C. Bulla, Winston-Salem, was elected president, and Dr. Frank M. Register, Raleigh, secretary.

Personal.—At the annual meeting of the Rutherford County Medical Society, held at Rutherfordton, Dr. Frank W. H. Logan, Rutherfordton, was elected president.——Drs. Foy Roberson and Baird U. Brooks have been elected members of the board of health of Durham.——Dr. Kemp P. B. Bonner, Morehead City, secretary of the state board of medical examiners, has been appointed director of the bureau of maternity and infant hygiene of the state board of health.

State Medical Meeting.—At the annual meeting of the Medical Society of the State of North Carolina, held in Winston-Salem, April 25-27, under the presidency of Dr. Hubert A. Royster, Raleigh, the following officers were elected for the ensuing year: president, Dr. John Wesley Long; vice presidents, Drs. Frederic M. Hanes, Greensboro, Thomas C. Johnson, Wilmington, and Benjamin L. Long, Hamilton, and secretary-treasurer, Dr. Lewis B. McBrayer. Asheville was selected as the meeting place for the 1923 convention.

OKLAHOMA

Hospital News.—Additions to cost $150,000 will be erected at the Okmulgee City Hospital, including an institution for negro patients.——A new hospital will be erected at Watonga, at a cost of $20,000.——The Clinton State Hospital for tuberculous patients, Clinton, was opened to the public, April 3.

Personal.—Dr. Fred S. Watson, Okmulgee, has been appointed city and county physician, to succeed Dr. John E. Bercaw.——Dr. Milton K. Thompson, Muskogee, will leave for Europe, May 28, to represent the state medical association at the Tenth International Congress of Otology in Paris.——Dr. LeRoy Sante, St. Louis University School of Medicine, St. Louis, read a paper before the Tulsa County Medical Society, April 24.

OREGON

Hospital News.—An addition will be erected at the Sellwood Hospital, Portland, to increase its capacity to ninety-two beds.——A new Catholic hospital was recently dedicated at Bend.——The Western Oklahoma State Tuberculosis Sanatorium, Clinton, was opened to the public, April 3, and twenty patients have already been admitted.

PENNSYLVANIA

New Antituberculosis Association.—The McKean County Antituberculosis Association was organized at Smethport, April 20.

Practitioner for Seventy Years.—The Lebanon County Medical Society tendered a complimentary dinner to Dr. William M. Guildford, April 26, in celebration of his seventieth year of continuous practice in the city of Lebanon.

Philadelphia

Nathan Lewis Hatfield Lectures.—Sir Thomas Lewis, London, England, delivered the fourth Nathan Lewis Hatfield lecture at the College of Physicians of Philadelphia, May 5, on "The Action of Digitalis in Cases of Auricular Fibrillation and Flutter."

Personal.—Dr. Charles J. Hatfield has resigned as managing director of the National Tuberculosis Association, Washington, D. C., so that he can devote more time to the Henry Phipps Institute, of which he is director.——Dr. Robert P. Sturr has been appointed assistant radiologist to the Philadelphia Polyclinic Hospital.——Dr. Earl D. Bond has been appointed head of the Kirkbrides (Pennsylvania Hospital), to succeed Dr. Owen Copp, who will retire in October.

Gifts to Phipps Institute.—At a meeting of the advisory council of the Phipps Institute, Philadelphia, April 29, gifts totaling $150,000 were announced. The sum of $25,000 will be given yearly for five years by the Carnegie Corporation, for research purposes. Josiah H. Penniman, Ph.D., acting provost of the University of Pennsylvania, stated that the board of trustees had voted $25,000 to be given during the next two years to the institute. The family of Henry Phipps announced that they pledged $500,000 to the endowment fund, provided an additional $2,500,00 be raised.

Society Meetings.—At the annual meeting of the Obstetrical Society of Philadelphia, Dr. Stephen E. Tracy was elected president and Dr. Charles S. Barnes, secretary.——The Pathological Society of Philadelphia elected Dr. Frederick D. Weidman president, and Dr. Frank B. Lynch recorder.——The Section on Industrial Medicine and Public Health of the College of Physicians elected Dr. William S. Higbee chairman, and Dr. Ralph E. Getelman clerk.——At the annual meeting of the Samaritan Hospital Medical Society, the following officers were elected: president, Dr. Gustavus C. Bird; vice president, Dr. Hugh Cotter Boyle, and secretary-treasurer, Dr. James Norman Coombs.

Hospital Survey.—The Welfare Federation will make a comprehensive survey of the hospital situation in Philadelphia, in order to place the hospitals on something approximating a cooperative basis. Hospital enlargement plans contemplated for the city call for an expenditure of $20,000,000. These plans have been made tentatively by the individual hospitals, without reference to the need of the city as a whole, or the relation of one hospital to another with respect to public service. The chairman on the committee of charities voices the need for a central registry office to which any one can apply to learn of vacant beds available in the various hospitals.

SOUTH CAROLINA

Hospital News.—Work will be started immediately on a new wing to be erected at the Baptist Hospital, Columbia, at a cost of $50,000.——A new infirmary will be built at State Park at a cost of $10,000.——Through the generosity of an anonymous donor, a hospital will be erected on the site of the Citadel Military College of South Carolina, Charleston, at a cost of $60,000.

Child Welfare Service.—The state board of health is furnishing toxin-antitoxin free of charge. All county health departments are establishing free clinics at rural schools for the inoculation of children. In Charleston County alone, 2,500 toxin-antitoxin inoculations have been given since January.——A series of twenty child welfare conferences are being held in various rural sections of Greenville County Department of Health for the purpose of giving the mothers in the rural districts an opportunity to inform themselves of the problems of child hygiene.

Personal.—Dr. Barton Cooke Hirst, professor of obstetrics, University of Pennsylvania, Philadelphia, gave an address on "Surgical Treatment of the Commonest Diseases of Women" before a meeting of the Richmond Surgical Society, recently.——Dr. Walter Boone, health officer of Cherokee County, is convalescing from an operation for appendicitis.——Dr. B. R. Brown has been appointed city physician of Gaffney.——Dr. Thomas O. Kirkpatrick, Lowndesville, was elected president of the Abbeville County Medical Society, April 13.

TEXAS

Physician Convicted of Manslaughter.—We are informed that Dr. Emery H. Boaz, formerly of Memphis, is serving a term of from two to five years in the Texas State Penitentiary following conviction on the charge of manslaughter.

Hospital News.—A new city hospital will be erected at Houston, at a cost of $200,000.——Local physicians and business men will incorporate and establish a hospital at Mercedes.——A new city hospital will be erected in Ranger at a cost of $30,000.——A new building will be constructed at the

Mercy Hospital, Evansville, at a cost of $73,000. This addition will be operated by the Sisters of Mercy of Laredo.

WEST VIRGINIA

Personal.—Dr. Floyd F. Farnsworth has resigned as director of the bureau of venereal diseases, Charleston.

CANADA

Memorial to Osler.—Osler Hall, erected in Queens Park, Toronto, as an auditorium for the Toronto Academy of Medicine, was dedicated in April. In connection with the ceremonies, Sir Edmund Osler presented to the academy a portrait of his brother, Sir William Osler.

Western Ontario Academy of Medicine.—At a meeting of the academy held in London recently, Dr. Robert D. Rudolf, Toronto University, read a paper on the "Use of Cardiac Stimulants in the Treatment of Disease," and Dr. Clifford G. Grulee, Rush Medical College, Chicago, gave an address on "The Institution and Termination of Breast Feeding."

Canadian National Council for Combating Venereal Disease.—This council recently organized a business management committee which will have general supervision of the business affairs of the council. It is expected that eventually it will include outstanding business men in each province in Canada.

Canadian Red Cross.—The Nova Scotia division of the Canadian Red Cross has placed a public health nurse in every county in the province, who will be maintained by the Red Cross for one year in order that they may demonstrate their usefulness to the municipal authorities during that time; so that thereafter the latter will see the advantage of providing for and retaining a public health nurse. The same project is being carried out in New Brunswick.

Sigma Xi at McGill University.—The thirty-sixth chapter of Sigma Xi (scientific fraternity) was installed at McGill University, Montreal, April 13. This is the first chapter to be established outside the United States. The new chapter has a charter membership of forty-one, including representatives of science and of medicine. Dr. Walter W. Chipman was elected president of the chapter and Prof. R. DeL. French, secretary-treasurer. Sir Arthur Currie, principal of the university, was one of the guests at the installation dinner.

Personal.—Dr. Fred W. Routley, Maple, Ont., has been appointed director of the Ontario Division of the Canadian Red Cross Society.——Mrs. A. M. Huestis was elected president of the Toronto Social Hygiene Council recently to succeed Rabbi B. R. Brickner.——Dr. George E. Armstrong, professor of surgery at McGill University, Montreal, has received the honorary degree of master of surgery from the University of Dublin, Ireland.——The Order de Leopold has been conferred by the king of the Belgians on Col. C. A. Hodgetts, C. M. G., late city health officer of Ontario.

Society News.—The forty-second annual meeting of the Ontario Medical Association will be held in Toronto, May 30-31 and June 1-2, under the presidency of Dr. Frank J. Farley.——At a meeting of the physicians of Renfrew County, held recently, Dr. Thomas C. Routley, secretary of the Ontario Medical Association, organized the Renfrew County Medical Society, which will be in active affiliation with the provincial association.——The District Medical Society No. 6 was recently organized in British Columbia as a local subsidiary of the British Columbia Medical Association, with headquarters at Nanaimo. Dr. W. Fred Drysdale was elected president, and Dr. T. J. McPhee, secretary-treasurer.——At a meeting of the Vancouver Medical Association the following resolutions were passed: 1. Physicians should refuse to write prescriptions for known drug addicts, unless they were confined in a hospital for treatment. 2. The Pharmaceutical Association should be communicated with and every druggist be requested to telephone the physician for a corroboration of any prescription containing a narcotic. The druggists at a later meeting willingly consented to cooperate with the medical men in carrying out this resolution.

GENERAL

Association of American Teachers of the Diseases of Children.—The annual meeting of the association will be held at St. Louis, May 23, under the presidency of Dr. Edgar P. Copeland, Washington, D. C.

American Dermatological Association Elects.—At the annual meeting of the American Dematological Association, held in Washington, May 2-4, Dr. Howard Morrow, San Francisco, was elected president, and Dr. Udo J. Wile, Ann Arbor, Mich., secretary-treasurer.

Tuberculous Cows.—The deficiency appropriation bill now in conference in the United States Senate carries an appropriation of $2,578,800 for the eradication of tuberculosis among cattle. This assignment will be available to the states that appropriate an equal amount for use in their own territory.

National Anaesthesia Research Society.—It is announced that the monthly bulletin on "Current Research in Anaesthesia and Analgesia" will be issued in regular magazine form, following the May edition. Plans for the new arrangement will take some time for completion, and there may be some delay before the appearance of the next issue.

Air Service Medical Association.—The annual meeting of the Air Service Medical Association will be held at the Washington University Medical School, St. Louis, May 23, under the presidency of Brig.-Gen. William H. Wilmer, Washington, D. C. Drs. Newell C. Gilbert, Chicago, and Carl H. Greene, Rochester, Minn., will be among the speakers.

Reunion of Officers of Base Hospital No. 53.—Officers of Base Hospital No. 53, Laugres, Haute Marne, France, who attend the meeting of the American Medical Association in St. Louis, are invited to a reunion and dinner at the Hotel Jefferson, May 23, at 6 p. m. Dr. O. P. Bennett, Washington, Ill., is chairman of the committee to make arrangements.

American Gynecological Society Elects.—At the annual session of the American Gynecological Society, held in Washington, May 1-3, the following officers were elected for the ensuing year: president, Dr. John A. Sampson, Albany, N. Y.; vice presidents, Dr. Brooke M. Anspach, Philadelphia, and Dr. Frank W. Lynch, San Francisco; secretary, Dr. Arthur H. Curtis, Chicago, and treasurer, Dr. Charles C. Norris, Philadelphia.

Association of American Physicians Elects.—At the thirty-seventh annual meeting of the Association of American Physicians, held in Washington, May 4, the following officers were elected for the ensuing year: Dr. James B. Herrick, Chicago, president; Dr. Charles F. Martin, Montreal, vice president; Dr. Thomas McCrae, Philadelphia, secretary; Dr. Thomas R. Boggs, Baltimore, recorder, and Dr. Joseph A. Capps, Chicago, treasurer.

American Pediatric Society Elects.—The American Pediatric Society, at its thirty-fourth annual meeting in Washington, D. C., May 1-3, elected the following officers for the ensuing year: president, Dr. L. Emmett Holt, New York; vice president, Dr. William W. Butterworth, New Orleans; secretary and treasurer, Dr. Howard Childs Carpenter, Philadelphia; recorder and editor, Dr. Henry L. K. Shaw, Albany, N. Y.; member of the council, Dr. W. McKim Marriott, St. Louis.

American Society for the Control of Cancer.—This society called a meeting in Washington, D. C., under the auspices of the Medical Society of the District of Columbia, April 25. Dr. Hubert Work, President of the American Medical Association, and Dr. Charles A. Powers, Denver, president of the American Society for the Control of Cancer, gave addresses at the meeting, which was held to lay before the organization the preliminary plans for the campaign of education on cancer prevention which will be held in the autumn.

A Meeting of Cardiologists.—A meeting under the auspices of the Philadelphia Society for the Prevention and Relief of Heart Diseases will be convened at 3 p. m. on Tuesday, May 23, in the lecture room in the department of chemistry of the Washington University Medical School, St. Louis. Dr. S. Calvin Smith, Philadelphia, has been delegated by the society to convene this meeting at which time it is proposed to organize an association through which rules may be evolved which will establish, on a firm basis, the art of making and interpreting electrocardiographic records. An invitation is extended to all physicians especially interested in the study of heart affections to attend this meeting.

Dinner to Colonel Garrison.—On May 1 a number of the friends of Col. Fielding H. Garrison gave a dinner in his honor in Washington, D. C. Dr. Harvey Cushing presided. Following the dinner Dr. Welch gave an account of Dr. Garrison's work in medical history and bibliography. He pointed out the great debt which the medical profession of all civilized countries owes Dr. Garrison for his work in medical history, placing him in a group with Sudhoff, Neuberger and Singer, among the great medical historians of the world. Among the forty physicians who attended were representatives from practically the whole United States. Dr.

Garrison will leave shortly to take up new duties in the Philippines.

American Academy of Ophthalmology and Oto-Laryngology.—The twenty-seventh annual meeting of the academy will be held in the Twin Cities, St. Paul and Minneapolis, September 19-23, under the presidency of Dr. Walter R. Parker, Detroit. Papers of fellows who desire a place on the program, and abstracts of papers should be in the hands of the secretary not later than July 1. The headquarters are at Hotel Radisson, Minneapolis. Fellows who have any gross or microscopic specimens, old or new instruments, charts, manuscripts, or anything of scientific, educational or historical interest along the lines of ophthalmology and otolaryngology suitable for exhibition, are requested to communicate with Dr. Walter E. Camp, 910 Donaldson Building, Minneapolis.

New Prescription Blanks for Alcoholic Liquors.—A new physician's prescription blank, to assist in the enforcement of the prohibition laws, has been designed by Commissioner Haynes of the Treasury Department. The new forms are printed on specially sensitized, watermarked paper, from an engraved plate bearing a special watermarked seal with the word "Prohibition" in large letters. For still further protection, an ingenious machine manufactured to resemble a check protector will be used on each withdrawal permit from a warehouse. The new form of prescription blanks to be issued to physicians makes it incumbent on the physician to indicate the name and address of the druggist who is to fill the prescription. While these changes will cause a halt in the counterfeiting of withdrawal permits on distilleries for liquor and likewise on physicians' prescription blanks for intoxicants, yet an agitation has been started to make it a penitentiary offense to manufacture counterfeit or forged permits, physicians' prescription blanks or letterheads, envelops or any other stationery used in connection with the enforcement of the prohibition law.

Bill Proposes Hygiene Board Transfer to Department of Justice.—Transfer of the Interdepartmental Social Hygiene Board, an independent governmental bureau, to the Department of Justice is contemplated in a bill introduced in Congress by Representative Julius Kahn of California, chairman of the House Committee on Military Affairs. The proposed act enlarges the powers of the agents of the Department of Justice, including in their duties the investigation of commercialized vice conditions in the vicinity of army and naval stations and posts in the United States or insular possessions, or any place under the authority of the United States where armed forces, ex-soldiers and sailors may be located under the care and authority of the government. Introduction of the bill is largely due to agitation on the part of the League of Women Voters, who take the stand that the repression of prostitution and the elimination of venereal disease is vital to the health of the nation. An appropriation of $325,000 is included in the measure to cover the cost of the work by the Department of Justice.

Narcotic Drugs Act Passes Lower House.—The Miller-Jones narcotic bill passed the House of Representatives, May 4. This bill, which is an amendment to the import and export narcotic drugs act of 1909, as amended by the act of 1914, contemplates further restraint on the importation, exportation and in-transit shipments of narcotic drugs. All manufactures of coca leaves and opium, as well as of smoking opium are prohibited importation, but crude opium and coca leaves are admitted in such amounts as necessary for medical and legitimate uses. The Federal Narcotics Control Board, created by this bill, and comprising the Secretary of State, Secretary of the Treasury and the Secretary of Commerce, determine the amounts of the drugs necessary for legitimate purposes, and controls the granting of permits for exports, imports and in-transit shipments. Such narcotic drugs as may be exported will go only to those countries which are parties to the international opium treaty, and only to those countries when the board has proof that adequate control exists to insure the drugs being used for medicinal and legitimate purposes. Existing law makes it difficult to ship opium into this country except for legitimate uses, but there is no law to prevent shipping it across this country for transshipment to China or Japan for example. England recently enacted laws to control shipments from a foreign country through Canada or by Canadian railroads or British vessels, thus leaving our own ports open for in-transit shipments to the Orient. Thus our country is allowing transshipment of great quantities of commodities marked pharmaceutical in character. These commodities reach China and Japan, and thence about half of them are smuggled back to our own country to supply the army of underworld pedlers engaged in this illicit trade. It is said that smuggled goods that have once been exported from or through United States constitute the only source of supply of the underworld traffickers, and this the law which has just passed the House aims to destroy.

Annual Meeting of the National Tuberculosis Association.—The National Tuberculosis Association held its eighteenth annual meeting, May 4, 5 and 6, in Washington, D. C. The address of welcome was made by the Honorable Charles Evans Hughes, Secretary of State. Secretary Hughes said that those who have labored in the antituberculosis campaign have put the nation under a lasting obligation, and that through this campaign 100,000 lives would be saved in the present year. In his opening address, the president, Dr. J. A. Miller, made a special plea for the training of medical students and general practitioners in the cause, prevention and treatment of tuberculosis. He said that an urgent responsibility rests up physicians connected with medical colleges, who should recognize the importance of the special study of tuberculosis in their curriculums. Dr. Miller further said that voluntary organizations such as the National Tuberculosis Association should not attempt to dominate the field of disease prevention, as such work is the primary responsibility of the public health authorities, with whom it is their duty and privilege to work side by side. The managing director of the association, Dr. C. J. Hatfield, summarized the important developments of the year as follows: the cooperative arrangements of the association with six other national health organizations under the auspices of the National Health Council; continued assistance to the United States government in providing treatment for tuberculous ex-service men; a study of health hazards in industry; and the introduction of the modern health crusade into the curriculum of schools in fifteen states. Although the crusade is only 5 years old, 8,000,000 children are already enrolled. At a luncheon at the City Club, "The Modern Health Crusade at Home and Abroad" was discussed by the French ambassador, the Chinese minister, and the Czechoslovakian envoy extraordinary to the United States. About 100 papers were scheduled for the various sections of the association. Officers elected for the coming year were: president, Dr. Lawrence Brown, Saranac Lake, N. Y.; vice presidents, Dr. C. J. Hatfield, Philadelphia, Dr. J. W. Pettit, Ottawa, Ill.; secretary, Dr. G. M. Kober, Washington, D. C.; treasurer, Dr. H. V. Platt, New York City; executive committee, Drs. J. H. Peck, Des Moines, Iowa; D. R. Lyman, Wallingford, Conn.; C. C. Browning, Los Angeles; W. L. Dunn, Asheville, N. C.; A. M. Forster, Colorado Springs, Colo.; J. A. Kingsbury, New York City, and J. A. Miller, New York City. A reception to the delegates was held by President Harding at the White House, May 6.

LATIN AMERICA

Health Statistics.—The health department of the Municipality of Recife and the Rockefeller Foundation Commission in Rio de Janeiro state that the mortality of Recife during the year 1921 was 7,614 deaths, giving a coefficient of mortality for the municipality of 29.3 per thousand for the 260,000 population.

The Preston Hospital.—This hospital, which was recently opened, is operated by the United Fruit Company in Oriente Province, Cuba, and was built at a cost of $300,000. It has a capacity of 150 beds, which in an emergency can be increased to 250. The grounds contain an isolation hospital which will accommodate twenty persons, and a convalescent pavilion with a seventy-five bed capacity.

Pathologist Wanted in Panama.—Major Edgar Bocock, superintendent of the 500 bed Santo Tomas Hospital, Panama, the national government institution of the republic, states that the establishment is greatly in need of a capable pathologist to take charge of the laboratory. There is ample material for research work in all ordinary medical and surgical cases and tropical diseases.

Name of Street Changed to Honor Physician.—One of the streets that surround Finlay Park in Havana has recently had its name changed to Barnet Street, in honor of the memory of one of the leaders in organized hygiene and sanitation in Cuba, Dr. Enrique B. Barnet. He was chief of the public health service at one time and served in various capacities before, during and after the American occupation.

The Rijo Monument in Cuba.—The *Crónica Médico-Quirúrgica* brings an illustration of the imposing monument recently unveiled at Sancti Spiritus, a more than life size

figure of Dr. Rudesindo García Rijo, assassinated in 1912. He was the leading figure in his district in all medical, organization and welfare movements of all kinds, and often for the state at large, and was the representative in various international congresses, etc.

Pasteur Celebration in Venezuela.—The National Academy of Medicine of Venezuela has decided to hold a celebration of Pasteur's centenary. A prize, consisting of a gold medal and 2,000 bolivares, will be granted to the author of the best work presented. A portrait of Pasteur will be placed in the assembly room of the academy. A special medal will also be engraved to commemorate the occasion. In addition, a public session will be held, Dec. 27, 1923. The expenses will be paid from a fund created by public subscriptions.

Research in Uncinaria.—An expedition from the department of medical zoology of the School of Hygiene and Public Health of Johns Hopkins University will go to Porto Rico this summer to investigate hookworm disease. The expenses of this expedition will be paid by the International Health Board of the Rockefeller Foundation. The party will include Mr. D. L. Augustine, Mr. N. R. Stoll and Prof. W. W. Cort, Ph.D., from Johns Hopkins University, Prof. William A. Riley, Ph.D., of the University of Minnesota, and Dr. and Mrs. G. C. Payne of the International Health Board. The expedition will be under the direction of Prof. W. W. Cort. The party will leave the United States in June and will return about October 1. The headquarters in Porto Rico will be Utuado, where a small hospital has been furnished by the Porto Rican Department of Sanitation for laboratory and living quarters. The expedition will work in cooperation with Dr. R. B. Hill, director of Porto Rico for the International Health Board, and Dr. William F. Lippitt, commissioner of health of Porto Rico. The work of the expedition will include a continuation of the researches on the life of hookworm eggs and larvae in the soil which were begun in Trinidad during the summer of 1921. Field studies will also be made of the sources of human infestation under the conditions existent in Porto Rico.

Personal.—Dr. J. M. Fiallos of Tegucigalpa, Honduras, has arrived in this country to take a graduate course.——Dr. I. Barraquer, in charge of the eye department of the Clinical Hospital of Barcelona, and Dr. F. Poyales, official Spanish delegate to the International Congress of Ophthalmology, held recently in Washington, have returned home after delivering several lectures in New York.——The recent ophthalmologic congress in Washington was attended by Drs. F. M. Fernández, editor of the *Revista Cubana de Oftalmología*, C. E. Finlay, director of public health of Cuba, and J. M. Penichet, as representatives of the Cuban government. Dr. Fernández was appointed secretary of the general committee which will make arrangements for the next congress at London.——A banquet was tendered, March 30, to Prof. A. Buzzo to celebrate his appointment to the chair of toxicology in the University of Buenos Aires.——The *Revista de Medicina y Cirugía* of Havana states that Dr. F. Leza has been appointed assistant professor of surgery, and Dr. Martínez Cañas to another assistant post in the faculty.——Dr. Barbosa Vianna has obtained by competitive examination the chair of anatomy at the University of Rio de Janeiro.——Dr. A. Lindenberg is the president of the newly organized Sociedade de Biologia at S. Paulo, Brazil.——Dr. R. J. Fosalba, who was long minister from Uruguay in Cuba, is now minister to Peru. The National Academy of Medicine at Lima recently elected him to membership. He has long been a member of the Havana Academy, with the title "académico de mérito." The *Crónica Médico-Quirúrgica* remarks that in Cuba Dr. Fosalba was considered almost one of the national luminaries, as is also the case with Dr. R. Gutiérrez Lee, the minister from Colombia, who has practiced medicine in Havana now for more than forty years.

FOREIGN

Investigation of Milk Supply.—Prof. John Robertson, medical officer of health for Birmingham, England, has sailed with a party of experts to investigate methods of milk production and distribution in the United States.

The Two Hundred Thousandth Microscope.—The "jubilee instrument," bearing the number 200,000, recently turned out by a German firm, was presented by the firm to Prof. M. Heidenhain, director of the anatomy institute at the University of Tübingen.

Centennial of Thiersch.—The name of Thiersch is connected especially with his skin flaps, but he was one of the leading surgeons of the nineteenth century. The centennial of his birth, April 20, was celebrated by the publication of his biography by his son.

The Galligo Prize.—*Pediatria* brings the conditions governing the triennial Dr. I. Galligo prize of 500 liras which the Accademia Medico-fisico of Florence is to award Jan. 31, 1923, for the best work presented anonymously in competition on any subject bearing on syphilis or children's diseases. The article must be in Italian.

Health Insurance in Germany.—The *Medizinische Klinik* quotes some recent statistics to the effect that there were 9,000 *krankenkassen* in Germany in 1919, and that their total expenditures were 1,125 thousand million marks. Of this amount, only 182 millions was paid to physicians, and 147 millions for drugs, trusses, spectacles, etc.

Price of Bread as Base for Physician's Fees.—The *Münchener medizinische Wochenschrift* states that the physicians at Leisnig have posted in their offices a notice to the effect that the prewar fees are to be multiplied by the figure that represents the present price of a loaf of bread, divided by the prewar price of the same, namely, 15 pfennige.

The Seven Hundredth Anniversary of the Founding of the University of Padua.—This week marks the septicentennial of this Italian university, and festivities for three days are planned, closing with further festivities at Venice. A souvenir medal has been struck off which can be obtained in bronze, silver or gold. A scientific exhibit forms part of the program.

German Medical Society for Sexual Ethics.—Our German exchanges mention that the Deutsche Aerztebund für Sexualethik now has 900 members, and has begun the publication of a periodical entitled *Ethik, Pädagogik und Hygiene des Geschlechtlebens* (Sexual Life). Subscription for nonmembers is 25 marks, to be sent to the Physiologisches Institut of the University of Halle.

Jansen Returns His Prize.—THE JOURNAL mentioned recently that the Umberto I prize was recently awarded by the Rizzoli Institute at Milan to Dr. Murk Jansen of Holland for his works on orthopedics and his propaganda for orthopedics in Holland. The prize had been previously awarded to Vulpius, Schulthess and Vanghetti. Jansen delivered an address on receiving the prize and then presented the sum, 3,500 liras, to the Rizzoli Institute to be used to help poor patients requiring orthopedic care.

British Committee at Pasteur Celebration.—At the time of the celebration of the centennial of Pasteur's birth, in Strasbourg, a congress of hygiene and bacteriology will be held for discussion of questions relating to disease. In order to show the sympathy of Great Britain with the projects of the French committee, a British committee composed of the following members has been formed: Sir Charles Sherrington, chairman, A. Chaston, H. E. Field, Prof. Percy R. Frankland, Sir John M'Fadyean, Prof. C. J. Martin, Sir W. J. Pope, Sir James Walker and Sir Almroth Wright.

The Italian Eugenics Society.—The Società Italiana di Genetica ed Eugenica has its headquarters at the well equipped Instituto Italiano di Igiene, Previdenza ed Asistenza Sociale, founded by Prof. E. Levi. The proceedings are to appear in the review published by the institute, *Difesa Sociale*. The members of the Eugenics Society can obtain this review at reduced rates, 15 liras instead of the usual price, 25 liras. The dues of the society are 5 liras. The society is appealing for more members and for scientific contributions on topics connected with eugenics. The appeal is signed by Professors Loria, Gini and Artom, Via Condotti 33, Rome.

Medical Literature in Russia.—The American Relief Administration announces that ten of the leading medical colleges of Russia have received a large shipment of medical journals furnished by the medical division of the administration and the Rockefeller Institute. Further shipments are reaching Russia and will be distributed as rapidly as possible. Russian physicians requested that some medical literature be sent to them, as they have been cut off from all medical progress for the last five years. During March, eighty-three hospitals and public institutions in Petrograd were supplied by the American Relief Administration with medicines and other necessities.

Personal.—Professor Casagrandi was recently given an ovation on his resuming charge of the Hygiene Institute at

the University of Padua which had been taken for military purposes during the war.——Prof. A. Regnoli of Rome recently ordered a collyrium of 20 per cent. silver nitrate for use in prevention of ophthalmia neonatorum, and four children are blind or nearly blind in consequence. He has long been instructor in obstetrics and gynecology at the University of Rome.

The New Science of Metapsychics.—Prof. Charles Richet of Paris, of anaphylaxis fame and noted for other scientific achievements, recipient of the Nobel prize in 1913, has turned to the study of occult phenomena. In his recent work, "Traité de Métapsychique," he discusses subjective metapsychics as a chapter of psychology, saying that there are certainly other routes to our consciousness than the five senses. Some persons are more accessible to them than others. This special faculty or cryptesthesia, as he calls it, explains certain phenomena which we now are inclined to regard as supernatural. Cryptesthesia may be of the same order as the homing instinct which guides birds in their migrations.

Deaths in Other Countries

Dr. **Francisco Soca,** professor of clinical medicine at the University of Montevideo, senator, member of the cabinet and of the board of the Asistencia Pública, foreign associate of the Academy of Medicine at Paris, noted especially for his skill in diagnosis, aged 64.——Dr. **E. Bovone,** at Bulawayo, on an official mission to the Congo from the Belgian government.——The *Medicina Ibera* reports the deaths of Dr. **J. Acero García** of Madrid and also of Dr. **L. Fatas,** senator from Huesca, who succumbed to typhus contracted from a patient.——Dr. **L. Purgotti,** chief of the public health service at Perugia, Italy, for thirty years, aged 63.——Dr. **M. Urosa y Sánches** of Madrid.——Dr. **E. Berthold,** formerly professor of otology at the University of Königsberg, aged 85.——Dr. **J. Wieting,** chief of the Hamburg marine hospital. He was called to Turkey in 1902 to reorganize medical teaching and was at the head of the Gülhane Hospital at Constantinople until his return to Germany in 1915. He published a number of works on surgery.——Dr. **A. Merzweiler** of Freiburg, chief of the German Hospital at Tiflis, has succumbed to typhus, aged 43.

CORRECTIONS

Physiologic and Therapeutic Action of Light.—In the editorial on this subject which appeared in THE JOURNAL last week, the wave lengths given in microns should have been micro-microns.

Applicants Received Passing Grades.—In the report of the examination held in Missouri in October, 1921, through a clerical error the final grades of six applicants were given as less than 75 per cent. A report received later states that all these applicants received at least the passing grade of 75 per cent.

Government Services

Appropriation Bill Awaits Action on New Pay Measure

Annual appropriation bills of the Army and Navy will be delayed by both houses of Congress until action is taken on the McKenzie-Wadsworth pay bill for officers of the Army, Navy and U. S. Public Health Service. The new schedules of pay in this measure, it is claimed by Senate and House leaders, will result in a considerable saving to both the Army and the Navy, and appropriation bills cannot be passed until it is known whether the commissioned personnel are to be paid on a new schedule or on the pay basis of 1908. The war time pay schedule expires in July, 1922.

Board of Maternity and Infancy Hygiene Meets

At the first meeting of the Board of Maternity and Infancy Hygiene, held as a result of the recent act passed by Congress, Miss Grace Abbott, chief of the children's bureau of the Department of Labor, was chosen as chairman. The other members of the board are Surg.-Gen. Hugh S. Cumming, U. S. Public Health Service, and John J. Tigert, U. S. commissioner of education. Forty-one states, it was announced, have accepted the terms of the Maternity and Infancy law and agreed to duplicate the appropriations of the federal government for the protection of maternity and infancy. For the fiscal year ending June 30, 1922, $490,000 was appropriated by Congress, and for the full fiscal year ending June 30, 1922, $1,240,000, which will be distributed by the board among the states of Alabama, Arizona, Arkansas, Connecticut, Delaware, Florida, Georgia, Idaho, Indiana, Kansas, Kentucky, Mississippi, Missouri, Montana, Nebraska, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Virginia and Wyoming. Information was received by the board that the attorney general of the state of Massachusetts had stated to the legislature of that state that in his opinion the Sheppard-Towner act was unconstitutional, inasmuch as Congress exceeded its authority in the legislation by assuming police powers that are reserved exclusively to the states. A test will probably be made by the state of Massachusetts in the Supreme Court of the United States.

Distribution of Funds for Government Hospitals

A bill providing for the construction of twelve government hospitals at a cost of $17,000,000 has been introduced and favorably reported to the House of Representatives by Chairman Madden of Illinois, of the House Appropriations Committee. The measure makes a direct appropriation of $12,000,000 to be used at once, with a $5,000,000 additional amount to be used later, at the discretion of the director of the U. S. Veterans' Bureau. The facilities to be acquired as proposed by the bill are as follows:

District No. 1.—New England area: neuropsychiatric cases, 500 beds, $1,500,000.
District No. 2.—New York, New Jersey and Connecticut: tuberculosis cases, 500 beds; general cases, 150 beds; total 650 beds, $2,100,000.
District No. 5.—North Carolina, South Carolina, Georgia, Florida, Tennessee: general cases, 200 beds, $600,000.
District No. 6.—Louisiana, Alabama and Mississippi: neuropsychiatric, 350 beds, $1,050,000.
District No. 7.—Ohio, Indiana and Kentucky: neuropsychiatric cases, 500 beds, $1,500,000.
District No. 8.—Illinois, Michigan and Wisconsin: neuropsychiatric cases, 1,000 beds, $3,000,000.
District No. 9.—Missouri, Kansas, Iowa and Nebraska: neuropsychiatric cases, 500 beds, $1,500,000.
District No. 10.—Minnesota, North Dakota, South Dakota and Montana: neuropsychiatric cases, 500 beds, $1,500,000.
District No. 12.—California, Arizona and Nevada: tuberculosis cases, 500 beds, $1,500,000.
District No. 13.—Washington, Idaho and Oregon: neuropsychiatric cases, 250 beds, $750,000.
District No. 14.—Oklahoma, Texas and Arkansas: neuropsychiatric cases, 200 beds, $600,000.

No provision was made for additional hospital facilities for the states of Pennsylvania, Delaware, New Mexico, Colorado, Utah and Wyoming, the facilities for the care and treatment of disabled ex-service men being deemed sufficient in these localities. Plans are under way by the Committee on Appropriations to pass the bill through the House of Representatives at an early date.

Award of Distinguished Service Medals

Distinguished service medals have been conferred on the following officers, who served in the medical corps of the Army during the World War:

Col. Donald Macrae.
Col. Louis B. Wilson.
Col. Raymond Turck.
Lieut.-Col. George de Tarnowsky.
Maj. Elliott C. Cutler.
Maj. William F. Vervi.

All of these officers were in the reserve corps of the Army during the war and retired after their discharge to private practice.

Special Unit at Chicago Office

A special unit has been established at the Chicago office of the U. S. Veterans' Bureau, with a consultant and an assistant to handle cases pertaining to public health, which not only includes physicians and dentists, but also students desiring to enter colleges of medicine, dentistry or pharmacy, hospital nurses, trainers desiring courses in roentgen-ray work, laboratory technicians, those desiring special courses in chemistry, biology or pathology, and similar branches including also osteopathy, optometry and physiotherapy. The consultant will select and arrange special courses in the various clinics and hospitals adapted for the individual trainee. A special card index has been instituted giving an outline of the course selected for each trainee, the progress made and all other facts bearing on the case.

Foreign Letters

LONDON

(From Our Regular Correspondent)

April 17, 1922.

The Etiology of Miners' Nystagmus

Some years ago, Dr. Lister Llewellyn, a physician of great experience in miners' diseases, propounded the view that defective lighting was the cause of miners' nystagmus, making a point that, in open workings, it did not occur. A committee consisting of Professor Haldane, Professor Collis, Drs. Llewellyn and Rivers, and Mr. Pooley was appointed by the medical research council to investigate the subject. The council has now presented a report of great importance, with these unanimous conclusions: 1. The essential factor in the production of miners' nystagmus is deficient illumination. Other factors, such as position during work, accidents, alcoholism, infections, malnutrition, hereditary predisposition and errors of refraction, are of secondary importance. 2. The deficient illumination is due to the illuminating power of the safety lamps, to the distance at which these lamps have to be placed from the objects at which the miner has to look, and to the great absorption of light by the coal. In addition, coal dust or dirt, obscuring the lamp glasses, the choking of the wire gauze chimneys, and moisture or low oxygen percentages in mine air all reduce the light given by oil lamps, while lack of attention has a similar effect on electric lamps. 3. Workers at the coal surface are more affected than other underground workers. This appears to be due to the unrelieved blackness of the coal, and the greater need for accurate vision. 4. Distinct signs of nystagmus are present in a large proportion of coal miners, although in only a small proportion do the symptoms ever become so severe as to cause temporary incapacity.

The committee recommends that, since incapacity due to nystagmus is rare among coal miners working with open lights, everything should be done to make the standard of illumination of the objects looked at equal to that of an open light pit. This can be effected either by greatly increasing (to about two or three candles) the illuminating power of safety lamps, or by the employment of an electric lamp, to be fixed on the miner's head or belt, or in any other convenient position, so that the light is automatically brought nearer the working area and does not impair clear vision by shining directly into the eyes. At parts of the pit other than the coal face, the visibility of objects can be greatly increased by whitewashing, as well as by the stone dusting now obligatory for the prevention of explosions. The committee believes that, by these measures, nystagmus of a severity sufficient to cause disablement may be entirely prevented. During its investigations the committee noted that among the miners there is a prevailing belief that nystagmus causes permanent damage to, or even total loss of, sight if underground work is continued. This belief, held to be entirely erroneous, leads, it is said, to the development of psychoneurotic symptoms.

Financial Stress in the Consulting World

The press is devoting columns day by day to what it terms "the Harley Street Crisis." Since the war ended, consultants have had to increase the fee for the first consultation to from $10 to $15, and for the subsequent ones to from $5 to $10. With this increase and a diminished capacity to pay, the natural result has been that they have seen a large portion of their clients disappear. But a downward movement in the cost of living has set in, though it has not affected many items such as rent, rates and taxes. The press, therefore, comes forward with the suggestion that the consultants reduce their fees to the old level, and thus increase their work and even their earnings. But, as the correspondence in the press shows, the problem is a difficult one. The rent of a consulting room (office) in Harley Street, including service, is now from $1,000 to $2,000 a year. A well known surgeon, replying to the charge of too high fees, points out, in a letter to the *Times*, that a hospital surgeon often works in London from 11 a. m. to 5 p. m. daily, for no direct financial reward. His income has to be made during the hours which many business men devote to recreation. His expenses are high: today it costs a married surgeon with a small family $20,000 a year to live in Harley Street. His fees, therefore, have to be correspondingly high. In spite of this, every hospital surgeon is willing to accept a reduced fee if he knows that the patient can afford but little. An operation is often performed at one third or one fourth of the full fee. But it frequently happens that, after pleading poverty, the patients pay for every luxury in the nursing home. Wealthy men will pay $10,000 for a motor car, and begrudge $750 for an operation that has saved life. Another trouble of the hospital surgeon is that a number of men yearly obtain the degree of F.R.C.S. after coaching for some months. They then, without hospital experience, set up as consulting surgeons, and the public, often unable to see the distinction, allows them to practice operations they have only seen performed. For many operations, their skill is sufficient; but if the case should present some unusual feature in diagnosis or treatment, then wide experience alone will make the difference between cure and disaster. After the war, a number of young men, on the strength of operative experience in the field, started practice as surgeons in the Harley Street neighborhood; but the present stress has driven them out, and they have had to return to general practice in the suburbs or elsewhere.

The Labor Party and the Hospitals

In a previous letter (THE JOURNAL, April 15, 1922, p. 1138), the proposals brought forward by the British Medical Association to meet the changed conditions of the voluntary hospitals were set forth. The Labor Party has also published a program in the form of a pamphlet, entitled "The Labor Movement and the Hospital Crisis." It begins with a general criticism of the present system. There is no organized cooperation between the hospitals supported by voluntary subscriptions, or between them and the various hospitals under public authorities. Arrangements should be made by which general practitioners can remain in close touch with their patients under hospital treatment or, still better, take a share in their treatment. "An appointment to a hospital staff carries a certain monetary value, and so the number of appointments is jealously guarded, with the result that all big hospitals are understaffed." The nurses are described as "underpaid, and consequently servile to the physicians." They faithfully follow medical instructions, but any needs outside these are ignored. More consideration for the patient as a person is needed.

These and other complaints are only exaggerations, and whatever truth they express is due to the fact that we are living in an imperfect world inhabited by imperfect persons—a fact which socialism, in bringing forward its visionary schemes, fails to take into account. It is strange to hear a party bent on reducing every one to a dead level complaining of want of consideration for the individual. A similar inconsistency occurs when it complains that workmen's subscriptions to a voluntary hospital are a "compulsory levy," for "individuals cannot hold back if the majority are willing to subscribe." But this is exactly the mechanism by which the party works. Again, "the evils and odium" of

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the present Poor Law institutions are referred to, as well as their inferiority to voluntary hospitals. Now state control and support constitute the important difference between the former and the latter. Yet the Labor Party puts forward state control, complete or partial, of hospitals as the great reform, its program being that:

> All hospitals, special and general, should be so organized under one authority as to form the foundation on which a complete hospital system for the nation can be built. Treatment centers should be established in outlying districts and cottage hospitals in smaller towns. Each public health area should have one or more "county" hospitals. The "national" hospitals would be in London and other university centers. Cooperation would be established between the units and also the medical staffs and general practitioners, participation of the latter to be an essential feature of the hospital scheme. Health authorities should have sufficient beds under their own control to deal with all patients for whom they have already undertaken the responsibility, e. g., patients suffering from tuberculosis or venereal disease, schoolchildren, mothers and infants from the maternity and child welfare centers, and adults coming under the national health insurance scheme. Legislation would be introduced for the transference of the Poor Law infirmaries from the guardians to the local health authorities.
>
> Voluntary hospitals should have the option of being taken over by the health authorities entirely, of remaining on a voluntary basis entirely, or of receiving grants from public funds, conditional on efficiency and the representation of the local health authority on the boards of management. Cooperation between those remaining entirely on a voluntary basis and the public hospitals should be secured. Pressure on hospital bed capacity in the cities and towns should be relieved by the acquiring of convalescent homes in the country. Free dental clinics must be connected with all hospitals.

PARIS

(From Our Regular Correspondent)

April 21, 1922.

The Distribution of Physicians in France

For a long time, the irregularity of the distribution of physicians in France has been a cause of surprise. The *Semaine médicale* used to publish maps showing the number of physicians in each department. The irregular distribution is due to the fact that, in many cases, watering or health resorts, for example, the Riviera, Nice, Cannes and Mentone, are overcrowded with physicians during the season; while in the mountainous region there is such a dearth of physicians that the department authorities have been obliged to subsidize about fifty physicians in certain districts. This irregularity in the distribution of physicians is absolute, however, and not relative. If Nice, for instance, has one physician for 430 inhabitants, this is explained by the fact that it is an important health resort, and, consequently, it attracts a considerable floating population. Medical centers also attract a larger number of physicians than other cities. Nancy, having a faculty of medicine, has one physician for 830 inhabitants, while Toulon, with the same population, has one physician for 1,250 inhabitants. Montpellier has one physician for 530 inhabitants, and Limoges one for 1,000 inhabitants. These two cities have the same population, but Montpellier is the seat of a faculty of medicine.

In large cities, the distribution of physicians in proportion to the population is far from being uniform. Paris has one physician for 700 inhabitants, while Marseilles and Lyons, with more than 450,000 inhabitants each, have one physician for approximately 850 inhabitants. A greater difference still exists between Bordeaux and Lille. For a population of more than 200,000, the former has one physician for 830 inhabitants, and the latter one physician for 1,000 inhabitants. Dr. J. Noir explains this difference by the fact that a city has fewer physicians when it has an industrial character. For instance, Lille, with a faculty of medicine, has fewer physicians in proportion to its population than Bordeaux, which has also a faculty, because Lille is more of an industrial center than Bordeaux. The same conditions apply to Toulouse and Saint-Etienne, as Saint-Etienne, which is an industrial center, has one physician for 1,600 inhabitants, while Toulouse, with Montpellier, holding in France the record for the number of physicians, has one physician for 530 inhabitants; but Toulouse is also the seat of a faculty of medicine.

Dr. Noir makes an interesting statement concerning seaports. Navy ports especially do not seem to attract physicians, probably because their population is similar to that of industrial towns, and navy physicians give treatment to the civilian population while they remain in port. Toulon and Brest have one physician for 1,250 inhabitants; Lorient, one for 1,300; Cherbourg, one for 1,600, and Rochefort, one for 1,800. As regards commercial seaports, we find that Havre has one physician for more than 1,500 inhabitants, and Dunkirk and Cette one for 1,600 inhabitants. But, in this case the difference is not so important, as many towns of from 20,000 to 30,000 population have one physician for 1,200 or 1,300 inhabitants. As regards departments, excepting those with large cities and watering resorts, the number of physicians in proportion to the population is not always in proportion to the wealth of the region. Thus, we note that the department of Eure-et-Loir, which is the twenty-sixth department in the order of national wealth, has about one physician for 2,500 inhabitants, while Calvados, the sixteenth department, has one physician for 2,260. The Manche, the thirteenth department in the order of wealth, has one physician for 2,600 inhabitants, and the Gers, which is the fifty-second, has one physician for 1,370; while the Landes, which is eighty-third, has one physician for 1,800 inhabitants. In mountainous and poor districts, where population is scattered and means of communication are difficult, there are few physicians. In the department of Creuse, for instance, there is one physician for 2,900 inhabitants; in the Hautes-Alpes, one for 3,300; and, in the Haute-Loire, one physician for 4,000 inhabitants.

BELGIUM

(From Our Regular Correspondent)

LIÉGE, March 8, 1922.

The Law on Alcohol

Since the armistice, a law has been in effect in Belgium prohibiting the retailing of liquors. The minimal quantity that can be sold is 2 liters (quarts). As this law has been in effect three years, it was interesting to learn the results of its application. The Academy of Medicine made a report giving the law its full approval. It avers, notwithstanding the lack of complete data, that the law on alcohol has given favorable results as regards the repression of alcoholism. It holds that the law should be enforced more strictly, and that certain restrictions should be added to increase its efficiency. It attacks vigorously the idea of reestablishing, under the pretext of commercial liberty, the retail of spirituous beverages.

The National Federation of University Women

The National Federation of University Women has just been founded in Brussels. Its aim is to stimulate closer relations among women who have studied in universities, to safeguard their interests, to help and encourage the new students in the career they have chosen, and, finally, to form a national group, which will be affiliated later with the International Federation of University Women.

Anglo-Belgian Medical Agreement

The Academy of Medicine, requested by the minister of the interior to give its opinion on a proposition made by the British government in regard to an agreement between Belgium and England to allow reciprocal medical practice, has appointed a committee to make a report on the subject, composed of MM. Firket, Cousot, Putzeys, Fredericq, Bordet and Nolf.

Professor Arthus' Conference

During his recent sojourn in Belgium, Professor Arthus of Lausanne gave two lectures, in Brussels and Liége, at which leading physicians were present. His first lecture was,

of course, devoted to anaphylaxis, as it is he who developed Richet's discovery. He gave the history of the progress made in our knowledge of humoral phenomena; and it was interesting to note the different stages it has gone through. Called on to prepare precipitant serums and having at his disposal only one species of experimental animal, the rabbit, and one kind of antigen, horse serum, Arthus observed what grave general and local disturbances repeated subcutaneous injections of the serum produced in the animal. Intravenous injections entailed almost immediate death. The syndrome was similar to the one observed by Richet: diminished arterial pressure, modification of coagulability of the blood and of the amount of leukocytes, and respiratory and intestinal disturbances. But as our knowledge increases, new problems are facing us, and Arthus concluded by saying that the purpose of his two lectures was to present the aims of the experimental method which the problems of anaphylaxis have followed.

Military Burial Places in Belgium

A bureau of information has been organized by the communal authorities of Ledeghem to answer all inquiries concerning the condition of soldiers' graves in Belgium, whatever may have been the nationality of the men. The bureau will send photographs of graves if asked to do so. Its field comprises all Belgium, and it will also give information concerning graves in France, without, however, guaranteeing as prompt an answer as to inquiries concerning those in Belgium.

BERLIN

(From Our Regular Correspondent)

April 15, 1922.

Decrease in Infant Mortality

The census bureau of the empire published recently in the journal *Wirtschaft und Statistik* a comparison of the statistics on infant mortality in the various German government districts for the periods 1904-1906, 1909-1911 and 1919-1920, from which it appeared that conditions, in general, have improved considerably. While it is true that the mortality in the districts that formerly presented the fewest deaths remained essentially the same, the districts that previously had the highest mortality rates show, as a rule, a remarkable decrease. The census reports of the various German cities, as they appear in the Vierteljahreshefte deutscher Städte, published by the union of German statisticians, present a surprisingly good showing. In the large cities of Germany, during the year 1921, 36,823 infants died during the first year of life, which amounts to 122 for every thousand born living during the same year. This mortality rate constitutes the lowest figure ever reached here, and is all the more surprising in view of the exceedingly hot summer weather, which gave reason to fear a summer peak of infant mortality.

Agreements Between Physicians and Health Insurance Societies

It is a matter of common knowledge that since the introduction of social legislation, that is, since the central government has undertaken to provide for workmen protection and compensation in disease, accident and disability, there have been frequent disagreements between health insurance societies and physicians on the score of medical fees. At the outset, the physicians of the health insurance societies received a monthly or annual per capita fee, the number of physicians connected with a health insurance society being very small and their selection depending on the action of the executive committee of the society. The continual and increasing misunderstandings that grew out of this relationship forced the physicians to seek some means whereby they could procure relief from their absolute dependence on the executive committees of the societies. Under the leadership of a Leipzig physician, the physicians combined and succeeded in gradually bringing into recognition the principle of free choice of physician in the health insurance societies, by which arrangement all physicians who agree to comply with certain conditions (especially as regards a certain control of their activities) are permitted to treat members of the health insurance societies. However, this change of administrative method did not put an end to all difficulties, for differences in regard to the size of the medical fees were continually springing up. The physicians could not be other than dissatisfied with the small fees they were receiving for individual treatment, and the societies refused to advance the schedule rates beyond a certain point, declaring that with the means at their disposal they were unable to grant higher fees. As a consequence of these differences, repeated clashes have resulted, which have led to temporary suspensions of the agreements between the physicians and the societies. On numerous occasions, the intervention of the government has been necessary in order to assure for the health insurance societies the continued services of the physicians. The old conflict broke forth afresh, a few weeks ago. As a consequence of the increased cost of living, it was inevitable that the conceptions of the two parties concerned, with respect to medical fees, would no longer accord. In order to ward off a threatened rupture of relations, the minister of labor of the empire fixed a date in March for a meeting of the representatives of the various medical organizations and of the executive committees of the health insurance societies, with a view to reaching a final understanding in regard to the questions at issue. Fortunately, an agreement was effected in regard to compensation for the performance of individual acts, it being established that for every office consultation the minimal fee of the new Prussian medical tariff, 10 marks, and that for a domiciliary visit the minimal fee of 20 marks shall be paid. For special service special fees may be charged, as set forth in the new medical tariff mentioned above. Provision is made for an automatic increase in the fees to correspond to an eventual increase in the cost of living. Unfortunately, no modifying agreement was reached with regard to the per capita fee which is still in vogue in a large number of societies, including those of Berlin with a membership of 1,500,000. It is to be hoped that before long, in the interest not only of the physicians but also of the patients, these societies also will succeed in establishing a schedule by which physicians will be recompensed in accordance with the individual services performed.

Marriages

Eveleth Wilson Bridgeman to Miss Mary Cushing Whitridge Williams, both of Baltimore, April 29.

Hugh O'Donnell, Omaha, to Miss Helen Foster, Plattsmouth, at Papillion, Neb., February 21.

Clarence A. Jacobson, Chicago, to Miss Vida Wheeler of Enid, Okla., at Kansas City, April 29.

Emile C. Underberg, Stanton, Neb., to Miss Bertha Hopper, at Council Bluffs, March 25.

James M. Robb, Detroit, to Miss Virginia R. Yerger of Memphis, Tenn., April 19.

Charles R. Gowen, Denver, to Miss Anita E. Raab of Belleville, Ill., April 15.

Willis Alonzo Dewey, Ann Arbor, Mich., to Mrs. Camille Roe of Boston, April 3.

Edward Tanner to Mrs. Mary Berry, both of Battle Creek, Neb., in March.

Deaths

Joseph Nathaniel McCormack ● Louisville, Ky., died at his home of cerebral hemorrhage, May 4, aged 75. Dr. McCormack was born in Nelson County, Kentucky, Nov. 9, 1847, the son of Thomas McCormack, merchant and farmer, and Elizabeth Brown McCormack; he was the fifth of sixteen children. Leaving school at 12 he continued his studies alone while living on a farm, becoming proficient in Latin and mathematics. At 20 he entered Miami Medical College, Cincinnati, graduating in 1870, at 23, as valedictorian of his class. In 1873 he was granted the degree of M.D. by the medical department of the University of Louisville, and two years later removed to Bowling Green, Ky., where he resided until 1910. He married Corinne Crenshaw of Glasgow, Ky., in 1871. During an epidemic of yellow fever in 1878 Dr. McCormack aided in stamping out the disease and when a board of health was created in 1879 to combat cholera and yellow fever, he was appointed a member by Governor Blackburn. In 1883 he became executive secretary of the board, serving continuously until 1913. He was elected president of the Kentucky State Medical Association in 1881. Beginning with the passage of an act for the prevention of disease in live stock in 1885, Dr. McCormack was instrumental in securing important medical legislation in his state; a medical practice law in 1888, licensure laws in 1898 and in 1904; vital statistics law, 1908, and a bill combining health agencies in 1918. The life of Dr. McCormack is in fact the public health history of his native state. Moreover, it is said that he had not missed a session of the state legislature for forty-two years and that since 1888 he had written all the laws of the state dealing with public health, medical education and the practice of medicine. In 1912 he served one term as a member of the legislature.

However, the services of Dr. McCormack in public health work were not limited to his native state. He aided in organizing the Conference of State and Provincial Health Officers; he was a member of the International Quarantine Commission in 1892; of the National Conference of State Boards of Health from 1886 to 1894 and of the Confederation of State Licensing and Examining Boards. In 1888 he received official thanks of President Cleveland for his work in the cholera epidemic.

In the American Medical Association, Dr. McCormack served in many important capacities. In 1900, at the annual session of the Association in Atlantic City, N. J., a committee of three was appointed, known as the Committee on Reorganization, to study the then unsatisfactory conditions and to submit recommendations on the subject. On this committee, of which he was chairman, Dr. McCormack did most effective work. The report which was presented at the next session of the Association at St. Paul in 1901, was adopted unanimously. The committee was continued and, from 1901 to 1910, Dr. McCormack as chairman devoted much time and energy to establishing the form of organization adopted. In this work he traveled widely throughout the country, aiding in building up the constituent state and territorial associations. When the Council on Health and Public Instruction was organized in 1910 Dr. McCormack became a member as chairman of the committee on organization, and continued in this work until 1913. He was a member of the House of Delegates from 1902 to 1907, inclusive, and again in 1912.

JOSEPH N. MCCORMACK, M.D., 1847-1922.

Dr. McCormack's enthusiasm in the work to which he devoted his life was unabated to the end. He was actively engaged in his office on May 2. Soon after arising on May 3 he complained of dizziness and returned to bed. He fell asleep and gradually lapsed into coma from which he could not be roused. His death came May 4 at 7 a. m. The thousands of telegrams of condolence and eulogy received following announcement of his death bear witness to the esteem and honor in which he was held by the medical profession.

Many physicians live lives of usefulness in their communities, practicing their profession conscientiously and loved by all whom they serve. They find time amid the pressing cares of practice to consider the broader problems of medicine, of disease prevention, of health education and of the professional and social status of the medical profession. A few physicians, however, not only do all this for their own community, but also carry their work into the wider field of state and nation. Such a man was Joseph N. McCormack —a type, in his early days, of the early practitioner, but all his professional life a citizen, not alone of Kentucky, but of the whole country. He was a man of dignified and powerful personality, gifted in influencing for good those with whom he came in contact. In the history of the medical profession of America Joseph N. McCormack will have a permanent place and the medical profession of the whole country mourns his death.

Harry Oscar White ● Los Angeles; Harvey Medical College, Chicago, 1896; Medical Department University of Illinois, Chicago, 1904; formerly professor of anatomy, embryology, and histology, College of Physicians and Surgeons, Los Angeles, Calif.; member of the American Association of Anatomists; died, April 23, aged 47, at the Florence Ward Sanitarium, San Francisco, from chronic nephritis.

George Alexander Fleming ● Baltimore; University of Maryland School of Medicine, Baltimore, 1884; formerly professor of ophthalmology and otology, Women's Medical College, Baltimore, and demonstrator of ophthalmology at the University of Maryland School of Medicine, Baltimore; surgeon at the Presbyterian Eye, Ear and Throat Charity Hospital; died, April 18, aged 59, from heart disease.

McDowell Botts, Mexico, Mo.; Missouri Medical College, St. Louis, 1899; member of the Missouri State Medical Association; served in the M. C., U. S. Army, with the rank of captain during the World War; died, April 24, aged 46, at Lake City, Fla., from carcinoma of the arm, resulting from burns received while experimenting with the roentgen ray.

Joseph Melville Finney, El Reno, Okla.; Fort Worth School of Medicine, Medical Department of Texas Christian University, Forth Worth, Tex., 1900; formerly junior professor at Epworth College of Medicine, Oklahoma City, and professor of anatomy and surgery at Southwest Postgraduate Medical College, Oklahoma City; died, April 26, aged 53.

William Robert D. Blackwood, Philadelphia; University of Pennsylvania School of Medicine, Philadelphia, 1862; served as Army surgeon during the Civil, Franco-Prussian and Spanish-American wars, for which service he was awarded the Medal of Honor by Congress, and was retired with the rank of Brigadier General; died, April 26, aged 83.

Perry Schoonmaker ● New York City; University of Michigan Medical School, Ann Arbor, 1880; formerly assistant otologist at the Postgraduate Hospital and aural surgeon to the outpatient department of the Harlem Hospital; died, April 28, aged 67, from cerebral hemorrhage.

● Indicates "Fellow" of the American Medical Association.

Claude A. Power, Pulaska, Ia.; State University of Iowa College of Homeopathic Medicine, Iowa City, 1908; member of the Iowa State Medical Society; died, April 22, at the W. C. Graham Protestant Hospital, aged 41, from heart disease.

George Aitkin Stevenson, Rising Sun, Ind.; Rush Medical College, Chicago, 1865; member of the Indiana State Medical Association; county and city health officer; died suddenly, March 30, aged 84, from acute indigestion.

Charles William Miller ● Peoria, Ill.; University of Michigan Medical School, Ann Arbor, 1908; formerly county physician; died, April 22, aged 41, at the Saint Francis Hospital, following an operation.

William Thomas Wallace, Kitchener, Ont.; University of Toronto Faculty of Medicine, Toronto, 1902; Fellow of the Academy of Medicine of Toronto; was found dead in bed, February 26, aged 44.

Edward Hudson Knight, New York City; Long Island College Hospital, Brooklyn, 1882; for ten years ship surgeon on the S. S. *Prima* of Quebec; died, April 26, aged 71, from chronic nephritis.

William F. Bayless, Los Angeles, State University of Iowa College of Homeopathic Medicine, Iowa City, 1883; died, March 14, from injuries received in an automobile accident, aged 70.

John Floyd Lockhart, Mount Sterling, Ky.; Kentucky School of Medicine, Louisville, 1889; member of the Kentucky State Medical Association; died recently, aged 66.

John Edward Curtan, Los Angeles; Denver and Gross College of Medicine, Medical Department, University of Denver, 1908; died, April 27, aged 39, following an operation.

Richard E. Vernor, Nashville, Ill.; Miami Medical College, Cincinnati, 1876; member of the Illinois State Medical Society; Civil War veteran; died, April 5, aged 75.

George Hunter Greenwell, Los Angeles; California Medical College, Los Angeles, 1905; member of the staff of the West End Hospital, where he died, April 22, aged 59.

William Newton Sneed, Sr., Fairfield, Texas; Tulane University of Louisiana School of Medicine, New Orleans, 1870; Confederate veteran; died, March 28, aged 77.

Purdy Leander Hitchcock ● Crotan Falls, N. Y.; Medical Department of Columbia College, New York City, 1881; died, April 5, aged 72, from chronic nephritis.

Hugo C. Reich ● Sheboygan, Wis.; Rush Medical College, Chicago, 1897; also a pharmacist; city health officer; died, April 26, aged 65, from heart disease.

Arthur J. Richer, Ste. Agatha des Montes, Que., Canada; University of Bishop College Faculty of Medicine, Montreal, 1892; died, February 26, aged 53.

Myron J. Whitford, Dunellen, N. J.; Chicago Homeopathic Medical College, Chicago, 1883; member of the state legislature; died, April 24, aged 63

Roll N. Miller, Brookport, Ill.; University of Louisville Medical Department, Louisville, 1888; died, April 20, aged 53, from cerebral hemorrhage.

Robert Nathaniel Arthurton, Oakland, Calif.; Chicago Hospital College of Medicine, Chicago, 1915; died, January 30, aged 36, from tuberculosis.

Delia Estelle Howe, San Jose, Calif.; Woman's Medical College, Chicago, 1884; died, April 20, aged 64, following a long illness.

Gilbert Hartin, Nelson, B. C.; McGill University Faculty of Medicine, Montreal, 1896; died recently, aged 62, from carcinoma.

Marion Eleanor Leeper ● Northampton, Mass.; University of Michigan Medical School, Ann Arbor, 1907; died recently, aged 38.

James P. Slaughter, Chrisman, Ill., Louisville Medical College, Louisville, 1887; Civil War veteran; died, April 19, aged 78.

Archibald Frederick Targette ● Philadelphia; Jefferson Medical College, Philadelphia, 1893; died, April 25, aged 53.

Frank Thomas, San Francisco; California Medical College, Los Angeles, 1896; died, April 22, aged 68, from myocarditis.

John Golden, Fowler, Calif.; University of Michigan Medical School, Ann Arbor, 1869; died, April 26, aged 78.

Heber Robarts ● Belleville, Ill.; Missouri Medical College, St. Louis, 1880; died, May 1, aged 69.

Benoni Sweet, Wakefield, R. I. (years of practice); died, April 21, aged 82.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

AN APOLOGIST FOR "PATENT MEDICINES"

Henry C. Fuller, in "The Story of Drugs," Whitewashes the "Patent Medicine" Business

The Century Company has recently published a book by Henry C. Fuller entitled "The Story of Drugs, a Popular Exposition of Their Origin, Preparation and Commercial Importance." Henry C. Fuller is connected with a commercial organization that undertakes, for a consideration, to work out various technical problems for different industries. Mr. Fuller, apparently, handles that phase of the work that deals with the drug business; at least he acted as expert adviser, a few years ago, for a "patent medicine" manufacturer whose product had been exposed in THE JOURNAL.

There are several chapters in "The Story of Drugs" that will be found interesting to the layman, as well as instructive. Among these chapters are "What Drugs Are and Where They Come From," "Farming for Medicine," "Nature's Gift to Mankind," and even that on "How Medicines Are Made," although one of the half-page illustrations in this chapter shows the automatic bottling of "S. S. S." The chapter on "Vaccines and Serum Therapy" is, in general, accurate and instructive, although the author makes the mistake of confusing antitoxins with serums. In the chapter on "Vitamins" Mr. Fuller refers to the richness in Vitamin "B" of brewers' yeast and suggests that the brewing industry missed a great opportunity when it failed to bring to the attention of the public the fact—alleged—that beer is "a ready means for supplying these all important nutritional substances." When Mr. Fuller has studied the literature on vitamins more he will learn that it has not yet been shown that beer contains any vitamins.

WHAT IS "DOPE"

In the chapter on "Dope and Not Dope," antipyrin, acetanilid and acetphenetidin are given what is essentially a clean bill of health and the habit-forming tendencies of these drugs are dismissed with the phrase that they "need cause little concern." In this chapter, too, Mr. Fuller devotes a good deal of space to Coca Cola and its active ingredient, caffein. He seems quite favorably disposed toward this "soft drink," giving more than a page to the testimony of one of the witnesses who appeared as an expert for the Coca Cola people. He does not, however, quote from the testimony of the government experts in the same case, which was unfavorable to Coca Cola—not even from his own testimony. For Mr. Fuller was, at that time, a government employee and appeared as one of the government witnesses in the Coca Cola case. His testimony was to the effect that he had examined samples of Coca Cola and found caffein, some legs of insects, part of a bumble-bee, a little straw and hay-like material and other extraneous matter. He testified further that, although, in his opinion, the words "coca" and "cola" mean, respectively, coca leaves and cola nuts, he was unable to find any coca or cola products in the samples analyzed. This was when he was testifying against Coca Cola for the government.

The chapter on "Beginnings and Accomplishments of the Medicine Industry" starts out well, but ends with a fulsome puff of the manufacturers of "S. S. S.," "Pinkham's Vegetable Compound," "Bromo Seltzer," "Carter's Little Liver Pills," "Pierce's Golden Medical Discovery," etc. As indicative of the perspective shown in this chapter, we find three and one-half lines devoted to the story of the founding and development of Sharp & Dohme, less than five lines to Parke, Davis & Co., a trifle over five lines to Squibb's, fourteen lines to Mulford, half a page to S. S. S., nearly a full page to Lydia E. Pinkham, a page and a quarter to Bromo Seltzer and three fourths of a page to Carter's Little Liver Pills!

WHY ARE THERE NO PATENT MEDICINES?

In the chapter on "Patent Medicines: Their Place in the Economy of the Nation," Mr. Fuller very properly points out that the phrase "patent medicine" has become a misnomer, as there are very, very few true patent medicines on the market today. He states that many years ago patents were granted on such medicines, but that "this practice has long since ceased." He does not, however, tell why it has ceased. Yet, Mr. Fuller surely knows why. Practically no "patent medicines" of today could be patented by their manufacturers, and they would not be patented if they could. They could not be patented because they are not new and useful substances, which they must be to be patentable; they would not be patented because modern nostrum makers are unwilling to give the public the facts regarding the composition of their products (as required by the patent office), knowing that secrecy and mystery form the backbone of the business, and further because they are not satisfied with the seventeen-year monopoly that a patent would give, but prefer the perpetual monopoly obtained by a trade-mark. These facts, not generally known to the public and important to a proper understanding of the "patent medicine" problem, are utterly ignored by Mr. Fuller. Why?

In this same chapter Mr. Fuller says that among retail druggists "there is a great deal of ignorance" respecting the "composition and character" of "patent medicines" and that the people "outside of the manufacturers themselves" who really know "what proprietary medicines are and what they will do are the people who use them." Yet, a page farther on he quotes what he describes as an able summary of the situation to the effect that "90 per cent. of the buyers of proprietary remedies do not know what they contain; neither do they care!"

THE ALCOHOLIC NOSTRUMS

In this same chapter Mr. Fuller decries the "mistaken popular notion" that liquid patent medicines "are composed chiefly of alcohol" and declares:

"The actual facts are that the old line liquid remedies contained no more alcohol than is necessary to keep the medicinal agents in solution and prevent spoilage from bacteria and molds."

It is hard to believe that Mr. Fuller does not know the facts in the case: that "Peruna"—certainly an "old line liquid remedy"—originally contained 28 per cent. alcohol, which was later hammered down to 20 per cent. and now, in the "dry" period, carries 12 per cent.; that "Wine of Cardui" for years carried 20 per cent. until the advent of national prohibition when the percentage was cut in half; that "Vinol," which for years had 18 per cent. was reduced in alcoholic strength to 10 per cent.; that Hostetter's Bitters," which contained 39 per cent. ("being only sufficient to hold in solution the extracted medicinal properties," etc.) was later cut down to 25 per cent.; that "Pinkham's Vegetable Compound," when sold as "a cure for prolapsus uteri" contained 18 per cent. alcohol, which was later reduced to its present strength, 15 per cent. All of these facts are certainly of interest to the public, but none of them do we find in Mr. Fuller's book.

PANEGYRIZING THE PROPRIETARY ASSOCIATION

In this same chapter, Mr. Fuller compliments the "patent medicine" organization, the "Proprietary Association," and publishes the alleged "requirements for membership" in that organization. These requirements, as have been pointed out by THE JOURNAL, mean little to the public, for the simple reason that no one, except the members of the Proprietary Association know who constitute the membership. In this same chapter, too, Mr. Fuller says that "the Peruna Company, the Swift Specific Company, and the Chattanooga Medicine Company, are among the best equipped of any factories manufacturing medicine in the world"!

In further defense of "patent medicines" he dwells on the farming communities—"the backbone of the nation"—and declares that the life of the farmer is such that "patent medicines" are a necessity to this class. Thus:

". . . they breed more profusely than does the urban population; their women are more prone to suffer the discomforts peculiar to their sex; and accidents with lacerations and liability to infection are common."

No wonder we find in the suggested "Family Medicine Chest" at the end of the book "Wine of Cardui" and "Pinkham's Vegetable Compound."

THE FAMILY MEDICINE CHEST

Then there is a chapter entitled "Self-Medication—the Family Medicine Chest." As a matter of fact, the "Family Medicine Chest" does not come in this chapter, but is given as an appendix to the book. While Mr. Fuller says that "the family medicine chest need not be a miniature drug store," yet, in his suggested "chest," he lists over one hundred and thirty preparations! In the list one finds among the many proprietary articles recommended, the following:

Bromo Seltzer	Pinkham's Vegetable Compound
Capudine	Laxative Bromo-Quinine
Camphocene	Lysol
Castoria	Sal Hepatica
Foley's Honey & Tar	Scott's Emulsion
Wine of Cardui	Vick's Vaporub

In this same "Family Medicine Chest" it is interesting to note the following:

Alcohol	Brandy
Blackberry Cordial	Whisky

The book might have been more practical if the author had told the lay reader how the alcoholic products just listed are to be obtained. One would also like to know how the layman, "in the isolated hamlets of the mountains and prairies," may obtain "Dover's Powder" and "Sun Cholera Mixture Tablets," both listed in the "Chest." These opium-containing preparations are, in the eyes of the federal authorities, so dangerous that even physicians can only prescribe them subject to the restrictions of the Harrison Narcotic Law.

After reading this book one wonders why the large amount of material in it dealing with the "patent medecine" industry was not published as a separate volume and issued, not by the Century Company, but by the "patent medicine" interests. The sandwiching of the eulogy of the "patent medicine" business among material that is meritorious gives the former a standing that it would otherwise not have. Possibly the nostrum interests should be pleased to have it published in its present form and under such respectable auspices as the Century Company. The purchasers, having paid $3.00 for the book doubtless feel that all the information it contains must be valuable and authoritative. It was Tom Sawyer, we believe, who persuaded his associates that whitewashing a fence is a privilege to be paid for rather than a duty to be grudgingly done. In our opinion, the "patent medicine" interests of the country could well have afforded to pay handsomely for the exclusive rights of this book and then to have distributed it gratis as a well-conceived piece of special pleading in their behalf. It is clear that Mr. Fuller has done the "patent medicine" industry a distinct service; what he has done for the public is not so clear.

Correspondence

POSTGRADUATE MEDICAL INSTRUCTION IN VIENNA

To the Editor:—It was with profound regret that I read the communication of the Committee of the American Students at Vienna, published THE JOURNAL, April 22.

My association with American physicians who have studied and visited in Vienna during the last thirty-five years has been one that has afforded me genuine pleasure, and I should regret any misunderstanding that might interfere with the successful work of the American student in our clinics.

In the particular matter under discussion, I cannot speak authoritatively, for I have been away from Vienna for almost eight months. But I have every reason to believe that every effort is being made to meet the desires particularly of American students. I received a few days ago the description of

one complete course in ophthalmology that has been planned to meet a frequently expressed wish on the part of American students for a continuous full-time course that would cover the entire subject in a fairly comprehensive manner; I am therefore taking the liberty of bringing this to your attention. The course is in English; it includes about 280 hours of work in two months' time (October and November); the lectures and demonstrations are given by all the members of the First and Second Eye Clinics, including the heads of the clinics; the registration is limited to fifteen students, and the fee is $200.

While other courses are, of course, offered, this course and others similar in character have been planned to meet the particular wishes of American physicians.

I sincerely hope that the present difficulties can be adjusted to the satisfaction of the American students, for the pleasant association that has always existed between American and Austrian scientists has been of mutual benefit to the two nations. We do not readily forget the particularly sympathetic and whole-hearted aid which many Americans have rendered my stricken country since the war, aid that has saved many scientists and their families from actual starvation. I am certain, therefore, that the misunderstanding will be of passing moment and easily adjusted.

Prof. Ernst Fuchs, Vienna, Austria.

To the Editor:—Since deciding to send our memorandum of March 24, last, for publication in regard to conditions in Vienna for postgraduate medical work (The Journal, April 22, p. 1210), Prof. D. H. Neumann, head of the ear department, has signified his willingness to have all book courses in his department read at $3 an hour, in compliance with the wishes of the American Medical Association of Vienna.

F. O. Kettelkamp, M.D., Vienna, Austria.
Secretary, American Medical Association of Vienna.

"BULLETINS OF NEW YORK'S MEDICAL CLINICS"

To the Editor:—In an editorial comment (The Journal, April 22, p. 1205), it is stated that "the benefits will be further extended if a similar cooperation or centralized control can be secured of the graduate medical schools and individual graduate courses available in a great city." I am asking you to help bring to the attention of the medical profession that we are now trying to raise $3,000 just for this purpose. Already, members of the profession have contributed $1,500. As soon as the $3,000 is raised, the Carnegie Corporation will give $12,000 toward the expenses of the first year's work in organizing graduate courses. It is remarkable that the local profession is asked to contribute toward the organization of courses of instruction intended mostly for physicians and surgeons from outside the community. Representation on the board has been apportioned among the medical schools. Other institutions will be represented as soon as the work is under way.

Otto V. Huffman, M.D., New York.
Secretary, New York Association
for Medical Education.

IS CODEIN A HABIT-FORMING DRUG?

To the Editor:—My interest in this subject arises from the annoyance and inconvenience put upon physicians, patients and druggists by the inclusion of codein in the Harrison Narcotic Law, and my impression, after thirty years of its extensive use, that there is no inherent property of the drug and no practical reason to warrant its being so included.

My first realization of the important place which codein had achieved in therapeutics was in 1915. Thinking that perhaps I was getting into a rut and failing to give my patients the benefit of medicines found useful by other physicians, I employed a bookkeeper in a large centrally located drug store to tabulate the ingredients in 1,000 prescriptions—the prescriptions to be taken equally from spring, summer, autumn and winter. Codein headed the list, occurring once in every eleven prescriptions; nux vomica, calomel, quinin, sodium bicarbonate, phenacetin, aspirin (acetylsalicylic acid) and strychnin followed in the order named.

Mentioning this to Dr. Henry P. Hynson, I was furnished by him with analyses of prescriptions found in the drug trade journals. In one summary of 117,000 prescriptions from consecutive files during 1907 and 1908, representing fifty-seven cities and twenty-eight states, codein stood seventh in the list, being exceeded only by nux vomica, quinin, calomel, sodium bicarbonate, salol and strychnin.

I have made some inquiry as to whether the use of codein has increased or decreased since these statistics were gathered. The druggist from whose files my own tabulation was made believes it more used at the present time.

One Baltimore druggist states that, as regards the sale of narcotics in general, statistics show that a very marked decrease has taken place during the last five or six years, owing to the restrictions of the Harrison law. In respect to codein, he believes that its legitimate use has not greatly decreased, if at all.

Why this popularity of codein? Codein and morphin are about equally expensive grain for grain; but as the dosage of codein is about four times as great, the cost to the patient is correspondingly increased. This popularity of codein, in spite of the high cost and without any drug-house propaganda, is due to its clinically demonstrated power to alleviate pain, allay cough and induce sleep without disagreeable side effects. It is not strongly constipating, and does not check secretion in the respiratory tract.

Is codein habit-producing? From my personal experience I answer in the negative. I recently sought the experience of the physicians of Maryland. From 1,250 cards of inquiry sent to members of our state society, I received more than 700 answers. Replies came from all our insane asylums; from our leading sanatoriums for nervous and mental diseases; from Dr. Wilkins with eighteen years' jail experience; from Dr. Woltereck, with four years' prison experience, and from Dr. Oliver, medical officer to the supreme bench. No case of codein habit had ever been seen in Maryland.

Of information received personally from outside Maryland, I quote this significant item: Dr. M. W. Swords, secretary of the Louisiana State Board of Health, writes: "During my whole experience with narcotic addicts, I have yet to see an addict of codein. It appears that this drug does not cause addicts in the same sense as the other derivatives of opium."

I have consulted all the books in the Surgeon General's Library on materia medica, pharmacology and drug addiction, and found but one reference to actual cases of codein addiction, namely, by Bastedo, who mentions having seen two codein habitues who "were broken of the habit without trouble." Turning to the medical journals, I found but two cases reported in the ninety years over which the drug has been used: one by Pelz in 1905 and one by Sollier in 1914.

The case by Sollier (*Revue de médecine légale*, 1914) is briefly this: In more than 400 cases of drug addiction treated by Sollier, this is the only one of codein habituation:

> A physician, aged 72, had been taking codein for more than six years for supposed rheumatic pains. He thought that he still was affected by the disease for which codein was originally taken. Beginning with from 4 to 6 grains (0.25 to 0.4 gm.) a day, he finally attained a dosage of 30 grains (2 gm.) a day. He never took other narcotics or analgesics. The drug was withdrawn completely in eight days. The patient left in six weeks in excellent health.

The case of Pelz (*Deutsche medizinische Wochenschrift*, June 1, 1905) is of importance in that it seems to be at the foundation of a belief in the codein habit. Although codein had been discovered seventy-three years before, and had been extensively used for twenty years, prior to 1905, according to Pelz not a single case of chronic codein habit was found in the literature; and all authors agreed that acquired habituation was not to be feared. He then gives the detailed history of a case of codein habituation, the safient features of which are as follows:

A man, aged 26, whose father was a drunkard and who had one brother mentally defective, as a child isolated himself from others because he felt himself diseased and everywhere at a disadvantage; he was thrown into a rage if his wishes were not fulfilled; he was dull at school and often thought of suicide. At 17 he was unhappy, and experienced repugnance toward life. At 20, because of unrest, he rode often on the night express between Königsberg and Berlin. On one such journey he shot himself in the temple because of disgust with himself. He seemed to hear some one say, "Shoot yourself dead!"

After recovery from this attempted suicide, he was more wretched than ever. Because of psychic irritation, restlessness and dejection, a nerve specialist prescribed 0.5 grain (0.03 gm.) of codein three times daily as a sedative. This availed little. One day he took 15 grains (1 gm.) all at once. This allayed his anxiety and restlessness and gave a sense of well-being. He later increased the dose of codein up to 25 grains (1.6 gm.) a day. Without codein, he could not get along at all—was irritable and tired of life. At the end of six months he was taking 30 grains (2 gm.) daily. At the end of a year, three large doses failed to relieve him. He was sensitive to noise, and filled his ears with wax to protect himself from this. He bought a reservation on the railroad to East Prussia and spent his nights riding back and forth, driven by unrest and depression. He was treated for alcoholic excess in an institution. He used opium, about 1 grain (0.065 gm.) daily, and developed a habit for "antimorphin," a nostrum containing morphin. He took codein in conjunction with this—from 35 to 50 grains (2.25 to 3.25 gm.) daily. He used barbital (veronal) from 7½ to 15 (0.5 gm. to 1 gm.) grains daily. Finally, he took cocain for a short period.

He entered the Königsberg Psychiatric Clinic, Feb. 25, 1905, where he was deprived of all drugs. He did not sleep for two nights. On the third and fourth nights he slept well with the aid of 15 grains of barbital. On the fifth night he slept well without any soporific, and was psychically more easy and cheerful. March 23, he was transferred to a suburban sanaterium for treatment, presumably for his mental state.

The patient never had a sane hour as a boy or man. On entering the clinic, all drugs were withheld, yet he lost but two nights' sleep. Fifteen grains (1 gm.) of barbital gave a good night's rest on the third and fourth nights. On the fifth night, he slept well without medicine and was mentally more comfortable and cheerful. On succeeding nights he continued to sleep without aid.

To me the case goes to show what some insane and desperate man might do when entrusted with any medicine. It shows the effects of insanity rather than the effects of codein. Incidentally, it shows that a dosage of 15 grains (1 gm.) of codein was not poisonous although taken without having been preceded by gradually ascending doses, and also that a man who is taking from 35 to 50 grains (2.25 to 3.25 gm.) a day can sleep peacefully without drugs on the fifth night after withdrawal.

This case is of such a doubtful character that I believe that it should not be referred to as a case of codein habituation.

Is codein dangerous? The question as to what is a fatal dose of codein has incidentally arisen. I cannot find the answer. Cases of poisoning are on record from comparatively small doses, but they are cases of idiosyncrasy. I find no fatalities reported in medical literature. The only mention of death from codein that I have found is in a statistical table of the U. S. Census Bureau for 1909.

The Harrison law went into effect, March 1, six years ago. It applies to "opium or coca leaves or any compound, manufacture, salt, derivative or preparation thereof." It is designed to trace these preparations from the producer to the ultimate consumer, and is one of the most beneficent laws ever enacted. Its genesis goes back to the Spanish-American War, which gave us the Philippines. The Philippines gave us the opium problem. To eliminate the opium evil, a series of international commissions and conventions were held which have culminated in world-wide legislation against it. The Harrison Narcotic Law is the fulfilment of part of America's pledge to the world to help stamp out illegal opium traffic. After six years of operation, the time has come to take stock of the Harrison law and modify it to meet present-day knowledge. We should now know which derivatives of opium are habit-producing and which not, and it should be feasible to particularize the former and omit the latter.

Codein is one of our most useful and most commonly prescribed drugs. It is not a dangerous drug. No detailed account of a death from it has been found. No textbook gives the lethal dose. It apparently is not habit-forming. Known for ninety years, and extensively used for more than thirty years, only four cases of habit are mentioned in the literature. One of these cases is questionable, and the other three so easily cured as to make them negligible. Codein was used on an enormous scale in the United States for twenty-five years without restrictive laws, with apparently no habit formation. To a large extent, it displaces the use of morphin and heroin, which are habit-forming. Its inclusion in the Harrison law seemingly misbrands the drug and the physician who prescribes it, and imposes an unnecessary hardship on the physician, patient and druggist and useless expense on the government. Unless some as yet unreported evidence of habit comes to light, codein should be eliminated from the Harrison law.

WILLIAM T. WATSON, M.D., Baltimore.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

DESENSITIZING TO QUININ IDIOSYNCRASY

To the Editor:—In the *Archives of Internal Medicine* (24: 378 [Oct.] 1919) appeared an article by J. J. O'Malley and D. G. Richey on "Cutaneous Reaction and Desensitization in Quinin Idiosyncrasy." As this is not available to me, would you be kind enough to inform me, either by mail or in the columns of THE JOURNAL, as to the essential technic of desensitization in persons suffering from quinin idiosyncrasy? Here in the tropics where we use much quinin in malaria we often encounter persons who cannot take the drug because of idiosyncrasy, and it is often a serious problem to treat them. In Castellani and Chalmers' "Manual of Tropical Medicine," third edition, page 1192, it is stated that "Héran and Saint-Girons give quinin as follows: The first day a 'defensive dose,' or ½ grain of quinin sulphate mixed with 8 grains of sodium bicarbonate is given, and two hours later, 1½ grains. The second day, two hours after the 'defensive dose,' 3 grains are administered. The third day, two hours after the defensive dose, 6 grains are given, and so on, gradually increasing the amount of quinin." I have faithfully tried this method in fourteen persons suffering with quinin idiosyncrasy, and have never been able to establish any increased tolerance in any case. I mention this in the hope that you may be able to suggest some method essentially different. Please do not publish my name in this connection.

M. F. N., Colombia.

ANSWER.—The method consists of giving by mouth a "desensitizing dose" of 0.005 gm. of quinin sulphate with 0.5 gm. of sodium bicarbonate. In one hour and thirty minutes, 0.1 gm. of quinin sulphate and 0.5 gm. of sodium bicarbonate are ingested in cachets. The "desensitizing dose" remains constant each day, while in the second dose the amount of quinin is increased 0.1 gm. each day. The quantity of sodium bicarbonate remains the same. Only one dose is given during any one day. In one case cited, 2 gm. of quinin was being taken without any disagreeable symptoms. In the second case cited, two other methods of desensitization were instituted. One was the administration of quinin bisulphate, by mouth, in increasing doses, once a day. The initial dose was 0.03 gm., and it was increased by as much each day. The other method consisted in giving a "desensitizing dose" of 0.01 gm. of quinin bisulphate in 5 c.c. of sterile water,

intravenously, and after from thirty to forty-five minutes, giving a second dose, starting with 0.2 gm. of the same drug and increasing 0.1 gm. a day. By both methods 0.7 gm. could be given with safety, but symptoms of cinchonism appeared if larger quantities were administered.

SHAMPOO AND TREATMENT FOR OILY HAIR

To the Editor:—1. What would you recommend for oily hair that is getting thin and falling out? 2. Is lemon juice bad to use in the water for shampooing?

W. P. Wheeler, M.D., Oshkosh, Wis.

Answer.—1. This prescription may be of service: Salicylic acid, 2 drams (8 gm.), and ammoniated mercury ointment to make 1 ounce (30 gm.). Apply two or three times a week, and shampoo once a week with tar soap.

2. Lemon juice in water should not be harmful for shampooing, but it cannot be of any special service in the condition described.

ARGYRIA FOLLOWING THE USE OF SILVER ARSPHENAMIN

To the Editor:—Please advise me whether cases of argyria following the use of silver arsphenamin have been reported.

Edwin L. Mott, M.D., Fresno, Calif.

Answer.—Lochte (*Therap. Halbmonatsh.* **34**:792 [June 15] 1920) has reported a case in which, five days after the intramuscular injection of 0.2 gm. of silver arsphenamin, icterus appeared which lasted fourteen days. A few days later the patient noticed an ashen gray discoloration of the skin, which rapidly became more marked, finally assuming a steel gray color. Even the eyes showed the same color. Treatment was of no avail. Another case has been reported by Schlossberger (Supposed Case of Argyria After Silver Arsphenamin, *Therap. Halbmonatsh.* **34**:608 [Nov. 1] 1920.

OLIVER'S ELECTROLYTIC TREATMENT FOR LEAD POISONING

To the Editor:—What is Sir Thomas Oliver's electrolytic treatment for lead poisoning? Is it used in this country? What is its value? Please omit my name.

C. E. K., California.

Answer.—Oliver claimed that, by means of an electrolytic bath, persons suffering from lead poisoning would eliminate the lead from the system. He experimented on rabbits that had been poisoned with lead nitrate. The front paws of the animal were placed in a bath connected with the negative pole, and the hind paws in a second bath connected with the positive pole. After repeated applications, the lead paralysis rapidly yielded, and the animal seemed to develop an immunity to further lead poisoning. Men who had been poisoned by lead were subjected to the same form of treatment. Their improvement was marked, and lead was found in the water. Oxley repeated these experiments (*Lancet* **2**:880 [Oct. 8] 1914), and stated that no practical good would result from the regular treatment of lead workers by electrolytic baths as described by Oliver. His experiments showed a consistently negative result. It is now believed that any benefit derived from these baths is hardly dependent on the elimination of lead by ionization, being due to the fact that improvement of the body metabolism results in the natural elimination of the lead.

Preventive Medicine and Public Health.—Preventive medicine in the popular mind has long been interpreted as restricted in large measure to such matters as general sanitation, a pure water supply, efficient drainage, removal of public nuisances and the spread of infectious diseases, in other words, to the prevention of certain diseases as they affect the general community as a whole. This definition of public health as applied to the functions of the sanitary committees in our system of local government has been largely responsible for retarding the progress of the prevention of disease in the individual man, woman, and child, which has been described as "the real focal point of the problem," namely, the application to the individual of the medical knowledge which we already possess for the preservation of health and the arrest of the beginnings of disease.—Sir Napier Burnett, *Nation's Health* **4**:191 (April) 1922.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

California: San Francisco, June 26. Sec., Dr. Charles B. Pinkham, 906 Forum Bldg., Sacramento.
Delaware: Wilmington, June 20. Sec., Homeo. Bd., Dr. H. W. Howell, 824 Washington St., Wilmington.
Florida: Tampa, June 12-13. Sec., Dr. W. M. Rowlett, Tampa.
Georgia: Augusta, May 31-June 2; Atlanta, June 7-9. Sec., Dr. C. T. Nolan, Marietta.
Iowa: Iowa City, June 1-3. Sec., Dr. Rodney P. Fagen, Capitol Bldg., Des Moines.
Kansas: Kansas City, June 20. Sec., Dr. Albert S. Ross, Sabetha.
Kentucky: Louisville, May 22. Sec., Dr. A. T. McCormack, State Board of Health Bldg., Louisville.
Louisiana: New Orleans, June 8-10. Sec., Dr. Roy B. Harrison, Hibernia Bank Bldg., New Orleans.
Maryland: Baltimore, June 20-23. Sec., Dr. J. McP. Scott, 141 W. Washington St., Hagerstown.
Michigan: Ann Arbor, June 13. Sec., Dr. Beverly D. Harison, 504 Washington Arcade, Detroit.
Minnesota: Minneapolis, June 6-8. Sec., Dr. Thomas S. McDavitt, 539 Lowry Bldg., St. Paul.
National Board of Medical Examiners. Written examination in Class A medical schools. Parts I and II, June 19-23 and Sept. 25-29. Sec., Dr. John S. Redman, 1310 Medical Arts Bldg., Philadelphia. Applications for the June and September examinations must be sent in, respectively, by May 15 and June 1.
Nebraska: Lincoln, June 6-8. Sec., Mr. H. H. Antles, Lincoln.
New Jersey: Trenton, June 20-21. Sec., Dr. Alexander MacAlister, State House, Trenton.
New York: Albany, Buffalo, New York and Syracuse, May 22-25. Asst., Professional Examination, Mr. Herbert J. Hamilton, State Education Bldg., Albany.
North Carolina: Raleigh, June 26. Sec., Dr. Kemp P. B. Bonner, Morehead City.
Ohio: Columbus, June 6-9. Sec., Dr. H. M. Platter, Hartman Hotel Bldg., Columbus.
South Carolina: Columbia, June 27. Sec., Dr. A. Earle Boozer, 1806 Hampton St., Columbia.
Tennessee: Knoxville, Memphis and Nashville, June 16-17. Sec., Dr. Alfred B. De Loach, 1230 Exchange Bldg., Memphis.
Texas: Austin, June 20-22. Sec., Dr. T. J. Crowe, 918-919 Dallas County Bank Bldg., Dallas.
Vermont: Burlington, June 21-23. Sec., Dr. W. Scott May, Underhill.
Virginia: Richmond, June 20-23. Sec., Dr. J. W. Preston, 511 MacBain Bldg., Roanoke.
Wisconsin: Milwaukee, June 27-29. Sec., Dr. John M. Dodd, 220 E. Second St., Ashland.
Wyoming: Cheyenne, June 5-7. Sec., Dr. J. D. Shingle, Cheyenne.

ADDITIONAL HOSPITALS APPROVED FOR INTERN TRAINING

Since the publication of the list of Hospitals Approved for Internships in the 1921 edition of the American Medical Directory and the supplementary lists in The Journal of Oct. 1, 1921, and Feb. 25, 1922, the following institutions have been added:

Section I: General Hospitals:
The Hospital of the Good Samaritan, Los Angeles, Calif.
Providence Hospital, Oakland, Calif.
Battle Creek Sanitarium, Battle Creek, Mich.
Clifton Springs Sanatorium, Clifton Springs, N. Y.
St. Alexis Hospital, Cleveland, Ohio.
Affiliated with St. Anne's Infant Asylum and Maternity Hospital, Cleveland, for intern service in obstetrics and pediatrics.
St. Elizabeth's Hospital, Youngstown, Ohio
St. Vincent's Hospital, Toledo, Ohio.
Emanuel Hospital, Portland, Ore.
Mercy Hospital and School for Nurses, Philadelphia.
Peking Union Medical College Hospital, Peking, China.

Section III: Special Hospitals:
St. Anne's Infant Asylum and Maternity Hospital, Cleveland, Ohio.
Affiliated with St. Alexis Hospital, Cleveland, in nursing and intern service.
Portland Eye, Ear, Nose and Throat Hospital, Portland, Ore.

Alabama January Examination

Dr. Samuel W. Welch, chairman, Alabama State Board of Medical Examiners, reports the written examination held at Montgomery, Jan. 10-14, 1922. The examination covered 10 subjects and included 100 questions. An average of 75 per cent. was required to pass. Six candidates were examined, all of whom passed. Four candidates were licensed by reciprocity. The following colleges were represented:

College	Passed	Year Grad.	Per Cent.
Birmingham Medical College	(1915)		75.8
Tulane University	(1921)		88.1, 89.3

Columbia University	(1916)	91.9
Meharry Medical College	(1921)	79.7
Memphis Hospital Medical College	(1913)	78.3

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Emory University		(1917)	Georgia
Johns Hopkins University		(1904)	Georgia
Tennessee Medical College		(1907)	Tennessee
Vanderbilt University		(1918)	Tennessee

Utah January Examination

Mr. J. T. Hammond, director, Department of Registration of Utah, reports the written examination held at Salt Lake City, Jan. 3-5, 1922. The examination covered 10 subjects and included 100 questions. An average of 75 per cent. was required to pass. Of the 4 candidates examined, 2 passed and 2 failed. Three candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Harvard University		(1921)	88
University of Pennsylvania		(1921)	80.7
	FAILED		
Creighton University		(1921)	73.1
National University, Athens		(1891)*	63.5

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Chicago		(1910)	Illinois
University Medical College of Kansas City		(1907)	Missouri
Washington University		(1918)	Missouri

* Graduation not verified.

Book Notices

EPIDEMIOLOGY AND PUBLIC HEALTH. A Text and Reference Book for Physicians, Medical Students and Health Workers. In Three Volumes. Vol. I. Respiratory Infections. By Victor C. Vaughan, M.D., LL.D., Chairman of the Division on Medical Sciences of the National Research Council. Assisted by Henry F. Vaughan, M.S., Dr.P.H., Commissioner of Health of the City of Detroit, and George T. Palmer, M.S., Dr.P.H., Epidemiologist for the Department of Health of the City of Detroit. Cloth. Price, $9. Pp. 688, with 81 illustrations. St. Louis: C. V. Mosby Company, 1922.

When one who has been an active and successful worker for many years sits down to give to his fellow workers the fruit of his investigations and meditations, the whole world is the gainer. There are few students of public health in the United States who have had so rich an experience as Dr. Vaughan and have utilized so well the opportunities that have come to them. The first volume deals with the respiratory infections. In this book are discussed the epidemiologic and public health aspects of such diseases as tuberculosis, influenza, pneumonia, measles, diphtheria and other infections known or believed to enter through the respiratory tract. It is a little surprising to find leprosy included in this volume, since, as Vaughan himself states on page 521, "there is reason for believing that the leprosy bacillus finds its entrance through wounds on the surface," and not by way of the respiratory tract. The volume concludes with an interesting chapter on weather and disease in which, however, no mention is made of rheumatism. The preface to this volume contains ten vividly written pages which should be read and reread by every student of public health. This picturesque outline of Vaughan's own life experience will undoubtedly become a classic.

Most of the chapters on specific diseases contain a full and interesting historical survey. The histories of scarlet fever and of cerebrospinal meningitis are particularly complete and interesting. Throughout the book, Vaughan's own great store of personal information is freely drawn on, and the opinions that he expresses, based as they are on his matured judgment, will be of great value to all workers in this field. Occasionally there are instances of hasty proof reading which should be corrected in subsequent editions. On page 116 the statement is made that "as the matter stands today (1921) every case of pneumonia should be regarded as a possible source of danger to others, should be isolated and the sputum deposited in special containers which should be burned," while on page 142 this opinion is apparently contradicted in the words: "With proper precautions we do not believe that strict isolation is necessary in the care of pneumonia patients." Some readers may be left a little in doubt as to Vaughan's real opinion about the desirability of quarantine in pneumonia. There is more or less repetition in certain sections, some of it perhaps unavoidable. Occasionally the same phrase is repeated without change, as in the first sentence on page 298, "Pfeiffer's work was never accepted whole-heartedly." This phrase is exactly reproduced on page 383. It is an exaggeration to say (page 59) "The diphtheria bacillus is frequently found in the saliva of normal individuals," and again (page 223) "The [diphtheria] bacillus seems well-nigh ubiquitous. Thousands of people in health carry these deadly germs in their throats and mouths." We believe that it is a mistake to include, as Vaughan has done in certain chapters, so much elementary bacteriology of the sort that appears on page 118 and part of page 119. Irrelevant material of this sort swells the size of the book unduly, and is hardly complete or accurate enough to add much value to the treatise. On page 55, for example, the rather loose statement is made: "Of those bacteria which are pathogenic to man, only anthrax, symptomatic anthrax, botulinus, tetanus and malignant edema are known to be spore formers." The bacillus of symptomatic anthrax is not known to be pathogenic for man, and there are several other human pathogens besides those mentioned which should be added to the list of spore-formers.

On page 183, the date of the first printing of the London Bills of Mortality is stated to be 1629. While there is some uncertainty as to the exact date on which the parish clerks began the printing of weekly bills, it seems to be true that in one instance at least a weekly bill was printed as early as 1603, and in 1610 the printing of a blank form for the weekly bills appears to have been the custom. The parish clerks appear to have possessed no press of their own until 1625, which is the date usually given for the printing of these bills.

The book contains many excellent and original graphs and diagrams. The paper of the text is somewhat too highly glazed for comfortable reading by artificial light. The index is inadequate, and should be enlarged. No criticism of details, however, should or can detract from the great service that Vaughan has rendered all public health workers by the publication of this invaluable work. That it will have a great and lasting influence on public health practice and opinion in this country none can doubt. The appearance of the two additional volumes promised will be looked for eagerly.

AMERICAN FROHSE ANATOMICAL CHARTS. Plate No. 10. Chart 10a. Male Genito-Urinary Organs (External and Internal). Chart 10b. Female Genito-Urinary Organs (External and Internal). From Original Drawings by Max Brodel, Professor of Medical Drawing Johns Hopkins Medical School. Price, $16.50. Chicago: A. J. Nystrom & Co.

This chart is typical of a series of anatomic charts in colors to be used in the teaching of anatomy and surgery. Chart 10 consists of two sections, and contains eight diagrams, which show the pelvic organs of the male and female from various points of view and at various stages of dissection. The quality of the work of Professor Brödel of the Department of Medical Art in Johns Hopkins University Medical School is sufficiently well known to require no further commendation. The charts are excellently printed on linen cloth and are equal to the best foreign charts, on which American schools were formerly dependent. A key in the B. N. A. nomenclature accompanies each chart.

KYSTOSKOPISCHER ATLAS. Ein Grundriss für Studierende und Aerzte. Von Dr. med. Erich Wossidlo. Second edition. Cloth. Price, 195 marks. Pp. 98, with 83 illustrations. Leipsic: Wilhelm Englemann, 1921.

The present edition of this valuable book deserves all the praise bestowed on the first edition, and more. The value of the atlas is increased by the addition of new pictures, aiming to show variations of the same disease, and the effect of treatment on the pathologic conditions diagnosed. The changes of cystitis under adequate treatment, and the visualizing of the various phases following electrocoagulation of vesical tumors, merit special mention. The theory of the cystoscopic technic is the subject of a new chapter, written by Dr. Hartinger, a physicist.

Social and Industrial Medicine

WISCONSIN INDUSTRIAL COMMISSION RULES ON CHRISTIAN SCIENCE TREATMENT

A far-reaching decision was recently rendered by the Wisconsin Industrial Commission, when it ruled that an injured employee submitting to Christian science treatment, and refusing to receive competent medical and surgical care, cannot collect compensation under the workmen's compensation act. The case was that of an employee who accidentally scraped his shin on a box while working for a manufacturing company. Infection, septicemia and death followed the injury. The widow claimed death benefits, and the case was heard before the state industrial commission. Investigation disclosed that the accident occurred Dec. 16, 1921; that the employer, when first notified, Jan. 3, 1922, tendered competent treatment by a duly licensed physician, and that the treatment was refused. Investigation further disclosed that a Christian science practitioner was engaged by the employee soon after the accident, and that this practitioner continued in attendance until death, which occurred, February 8.

The question presented to the commission was whether or not the widow, because of the refusal of her husband to accept surgical treatment, should be barred from obtaining a death benefit. The commission was of the opinion that, if the injured man had accepted surgical treatment when offered, he would not have died, and that he would have recovered with no permanent disability. It was also of the opinion that the employee died because of an unreasonable refusal to submit to reasonable treatment. The applicant offered evidence to show that, in the opinion of the Christian science practitioner, the application of such science and belief would cure the human body of all diseases; but there was no proof on the part of the applicant that the application of medical and surgical treatment would not have suppressed the infection and saved the life of the injured man. In fact, there was no contention on the part of the applicant that proper medical and surgical care would not have cured the disability and prevented death. In view of the evidence, the commission could reach no other conclusion than that expressed.

The Wisconsin compensation law was amended in 1919, making the employer liable for Christian science treatment in lieu of medical treatment in all cases in which the employer did not specifically state that he would not be subject to such provision. In this case, however, the employer received no notice until January 3 that the injured man elected Christian science treatment, and on that date the employer protested and offered medical treatment. The commission therefore was of the opinion that the employer was not only not responsible for the death of the employee, but was not liable for any expense incurred for Christian science treatment.

CONTROL OF VENEREAL DISEASE IN SWEDEN

Sweden has attacked the venereal disease problem in a comprehensive manner. A recent report by Sir Lindsey Smith (*Health and Empire* **1**:37 [April] 1922), points out that most of the present laws date from 1918, but that some measures have been in force since the close of the Napoleonic wars. Any person with venereal disease who needs hospital treatment may go to one of the eighty-five county hospitals free of charge. Free medical treatment, medicines and appliances are given to a person having venereal disease in an infectious stage. One medical officer at least in each of the ten larger towns has been appointed for this work, and one for each of the 334 medical county districts. This cost the state 822,000 kroner in 1920. The government is also authorized to prescribe measures for enlightening the public as to the dangers of venereal disease, and the most effective means of preventing its transmission.

No one but a qualified physician is allowed under penalty of fine or imprisonment to treat venereal disease. Every physician must inform his patient of the nature of the disease, give him written instructions as to treatment and the prevention of its transmission, and notify the authorities of the age, sex and address, but not the name of the patient. If the patient discontinues treatment prematurely, the physician then reports his name and address to the inspector of health, who orders him to consult a physician immediately and forward a certificate to that effect. Should the patient ignore the order, the board of health is notified and the patient ordered taken to a hospital, if necessary by the police.

When a public prosecutor proceeds against a person for offenses against the public morals, e. g., rape, procuring or soliciting, he must report the accused to the inspector of health, who may order him examined, and treated if diseased. The law requires, further, that every physician try to discover the name and address of the person by whom his patient was infected. If this information is obtained, he informs the inspector of health, who orders such person to send a certificate of immunity from disease. If the certificate is not received, the inspector can compel an examination, and hospitalization if necessary. Prostitution has never been licensed in Sweden. Prostitutes are treated as vagrants who, after due warning, may be sent to a special reformatory for a period up to three years. It is an offense punishable by imprisonment for any one who knows or suspects he has venereal disease to expose another by sexual intercourse, even if the disease is not transmitted. Should a physician hear that one of his patients still in the infectious stage contemplates marriage, he must inform the marriage authorities, and the bans are prohibited. Should a married person expose his partner to infection, the injured party can be divorced unless the risk was knowingly and willingly taken.

SUPERVISION OF MIDWIVES

Today approximately two million births occur annually in this country. Thirty-three per cent. of those in New York City and 1 per cent. of those in the state of Wyoming are attended by midwives. This country, according to Dr. William R. Nicholson in his Hatfield lecture before the Philadelphia College of Physicians, is not prepared to handle its births. There are too few hospitals and too few physicians to give every mother her due. He is inclined to admit, therefore, that the midwife under present circumstances is a necessary menace. But he would demand that she work no longer without medical supervision. Twenty states require midwives to be licensed at present, but in some the procedure is a farce. Following investigation, Illinois, Missouri, Wisconsin and Rhode Island admitted that the law is not enforceable; fifteen states confessed to having no laws relative to the midwife and no knowledge at all on the question; only four states really control this practice, New York, Pennsylvania, Connecticut and New Jersey. Dr. Nicholson reports good results for the last seven years in Philadelphia County. He says that the outstanding and unique features of the supervision enforced by the board of medical education in Philadelphia are: (1) the insistence on a report from the midwife to the inspector who has her in charge within forty-eight hours after delivery, announcing, on a card furnished by the state, facts concerning the delivery, together with the address of the patient and the name of the midwife, and (2) the inspection of each mother and baby by the inspector, a medical graduate with special training in obstetrics, within the first few days after delivery. In a series of 51,693 deliveries by registered midwives, there were sixty-two maternal deaths from all causes, some of which cannot justly be credited to the midwife. It goes without saying that in a series so large all the ordinary forms of dystocia were encountered: breech presentations numbered 265; shoulder, 125; face, 52; occiput, 212; placenta praevia, 20; prolapse of the cord, 60; eclampsia, 30; sapremia, 96 cases; phlebitis, 19; puerperal hemorrhage, 99, and so on. There were in the series 333 twins, two cases of triplets, and one quadruplet birth. The number of children dying from all causes in the first week was 1,306. Of these deaths, 103 were due to deformities at birth incompatible with life, such as spina bifida and anencephaly; ninety-nine

were due to injuries at birth, including injuries from forceps and versions, all of course performed by physicians called in consultation. There were 325 stillbirths; how many of these were due to syphilis could not be learned; 399 deaths were due to premature birth, the causes of which could not be learned; but the hard work done by these women, the influence of unrepaired damage of previous labors, and syphilis were the chief factors. In the last four years there has been but one case of blindness among cases attended by registered midwives.

Medicolegal

Physician Not "Immediately" Disabled by Accident

(Herwig v. Business Men's Acc. Assn. of America (Mo.), 234 S. W. R. 853)

The St. Louis (Mo.) Court of Appeals, in reversing a judgment obtained by the plaintiff, says that he sought to recover on a policy of accident insurance issued to him by the defendant. The plaintiff testified that, in November, 1915, while he was driving through the woods, he was struck over the right eye by the limb of a tree, the blow making the eye sore. On the following day, while attempting to ford a stream, he was thrown into the water, which gave him a cold and a severe pain in the ear, followed by swelling and an abscess in the ear. Feb. 4, 1916, he got some dust in his left eye and then discovered that he could not see properly with the right eye. He continued the practice of medicine for from two to four days more, after which, during February, he was unable, he testified, to attend to about 5 or 6 per cent. of his cases; that in March he was unable to attend to a majority of his cases; and that he finally quit practicing medicine, April 1, 1917, owing to his defective eyesight. In short, the record in this case disclosed that the plaintiff made no contention that he suffered any disability after the accident, until Feb. 6, 1916. The uncontradicted evidence was that he was able to do, and did do, from the date of the accident up to Feb. 6, 1916, all the acts necessary in attending to the practice of his profession. The policy provided that the benefit was to be paid only in case the insured should be immediately, totally and continuously disabled solely as a result of accident. The word "immediately" was inserted in the contract of insurance to fix the time when the disability must occur. Can it be said that a man who was able to continue his practice of medicine as usual for a period of two months and a half directly after the accident, was immediately or totally disabled? The question does not admit of much discussion. The plaintiff's case, under the evidence and under a number of authorities, was clearly excluded from the provisions of the policy.

Abnormal and Unknown Conditions and Representations of Good Health

(Eastern District Piece Dye Works, Inc., v. Travelers Ins. Co. (N. Y.), 190 N. Y. Supp. 822)

The Supreme Court of New York, Appellate Division, Second Department, says that this was an action on a policy of insurance for $25,000, on the life of a Mrs. Klein, payable to the plaintiff corporation, of which she was president. Her application was dated July 14, and the policy was dated and issued, September 4. November 19, she was admitted to a hospital, where, following an operation, she died, November 26. A bill of particulars of the defenses which was ordered stated that the respects wherein the assured's representations were false in that she was not in good health were that she was said to have had chronic intestinal obstructions with a disease condition causing adhesions. The evidence showed that she was 54 years of age, and, until a few days before entering the hospital, had been engaged in active business. The intern who took her history gave as the substance of her statement that three years previous to that time she began to notice a mass protruding from the vagina the size of a hazelnut, which gave no pain or discomfort, and no urinary or rectal symptoms. The condition had remained practically the same; but three weeks previously the patient suddenly began to feel a sensation of pressure on the bladder and rectum; also as if something was giving way in the pelvis. This caused a frequency in micturition and painful defecation. The symptoms were not very severe, but the patient felt that the time had at last arrived when an operation should be performed. Her history revealed that she had had two children and no miscarriages. There was perineal tear, occurring thirty years before, which was never repaired. The bowels were in excellent condition; appetite fine. There was no nocturia or polyuria. The intern further testified that she told him that until about three weeks before she came to the hospital she felt perfectly well. The operating surgeon, discovering a congenital abnormal condition of the intestines which was puzzling to him and such as he had never seen in twenty-six or twenty-seven years' practice, passed beyond the minor operation for which the patient had come to the hospital and performed a serious major operation to correct or at least alter the condition, and the resulting shock caused death.

In other words, the bill of particulars, limiting the answer, alleged that the representations were false, in that the assured was said to have had chronic intestinal obstruction with adhesions. She went to the hospital for a minor operation, for laceration caused by childbirth thirty years previously, which, up to the time when the application for the policy was made, had no appreciable effect on her comfort, well-being, or general health. While there, apparently when she was under the influence of anesthetics, the physician discovered an intestinal abnormality; but this condition had continued for fifty-four years, from her birth, without any indication that it interfered with proper functioning. One may depart from the normal physically, and still be sound and have no infirmity, deformity or disease. The excuse for the major operation which resulted fatally was that one of the physicians present thought that the tissue looked malignant, but on subsequent examination it was found healthy and normal. Whether this condition was such as to render false the representations of the assurred that she was in a sound condition mentally and physically, had never had any bodily or mental infirmity or deformity, and had not been disabled, was a question of fact, when the purpose for which the representations were made was taken into consideration; namely, to induce the issuance of a life insurance policy. Certainly it could not be said as a matter of law that such representations were false. Yet, even if they were false, they were certainly not fraudulent.

Because the question of the falsity of the presentations was a question of fact for the jury, and the court could not dismiss the plaintiff's complaint by ruling as a matter of law that the assured was not in good health when the first premium was paid, a judgment dismissing the complaint, which was rendered by the court as a matter of law, is reversed, and a new trial granted.

Not All Communications Are Privileged

(Kosbovich v. Rodevitch (Neb.), 185 N. W. R. 343)

The Supreme Court of Nebraska reverses a judgment for $5,000 damages rendered in favor of the plaintiff for injuries arising out of an alleged assault and battery, because the court holds that it was error to exclude as privileged the testimony of the physician who treated the plaintiff for his injuries and, it was said, would testify that the plaintiff told him that he pulled his revolver and snapped it several times, but it would not go off. The court holds that, under the Nebraska statute, only such confidential communications are privileged as are necessary and proper to enable a physician to discharge the functions of his office according to the usual course of practice; and, while great latitude will be given to a physician in determining what facts should be disclosed, yet in its ultimate analysis it becomes a judicial question whether such communications were necessary and proper. It is difficult to imagine how the fact that the plaintiff had a revolver in his hand, and snapped it several times but that it would not go off, would throw any possible light on, or assist in any manner, the proper treatment of his injuries. The nature of the injury was self-evident, and the treatment would be the same regardless of what the plaintiff was doing when he received the injury. It is obvious that whether a communication was confidential and necessary and proper to be given must be determined in every case according to its peculiar facts.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, St. Louis, May 22-26. Dr. Alex. R. Craig, 535 N. Dearborn St., Chicago, Secretary.

American Association for the Study of the Feebleminded, St. Louis, May 18-20. Dr. R. W. Baker, Laconia, N. H., Secretary.

American Association of Anesthetists, St. Louis, May 22-24. Dr. F. H. McMechan, Avon Lake, Ohio, Secretary.

American Association of Industrial Physicians and Surgeons, St. Louis, May 22-23. Dr. W. A. Sawyer, 343 State St., Rochester, N. Y. Sec'y.

American Proctologic Society, St. Louis, May 22. Dr. Ralph W. Jackson, 245 Cherry St., Fall River, Mass., Secretary.

American Psychiatric Association, Quebec, Canada, June 6-9. Dr. C. Floyd Haviland, Middletown, Conn., Secretary.

Arkansas Medical Society, Little Rock, May 17-19. Dr. William R. Bathurst, 810 Boyle Building, Little Rock, Secretary.

Association for the Study of Internal Secretions, St. Louis, May 22. Dr. F. M. Pottenger, Title Insurance Bldg., Los Angeles, Secretary.

California, Medical Society of the State of, Yosemite, May 13-18. Dr. W. E. Musgrave, Butler Bldg., San Francisco, Secretary.

Connecticut State Medical Society, Bridgeport, May 17-18. Dr. C. W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.

Florida Medical Association, Havana, Cuba, June 30. Dr. Graham E. Henson, Jacksonville, Secretary.

Illinois State Medical Society, Chicago, May 16-18. Dr. W. H. Gilmore, Mount Vernon, Secretary.

Maine Medical Association, Portland, June 27-28. Dr. B. L. Bryant, 265 Hammond St., Bangor, Secretary.

Massachusetts Medical Society, Boston, June 13-14. Dr. W. L. Burrage, 42 Eliot St., Jamaica Plain, Boston, Secretary.

Medical Library Association, St. Louis, May 22-23. Dr. John Ruhräh, 1211 Cathedral St., Baltimore, Secretary.

Michigan State Medical Society, Flint, June 7-9. Dr. F. C. Warnshuis, 410 Powers Bldg., Grand Rapids, Secretary.

New Hampshire Medical Society, Concord, May 17-18. Dr. D. E. Sullivan, 7 North State Street, Concord, Secretary.

New Jersey, Medical Society of, Spring Lake, June 20-22. Dr. William J. Chandler, South Orange, Secretary.

North Dakota State Medical Association, Jamestown, June 1-2. Dr. H. J. Rowe, Lisbon, Secretary.

Radiological Society of North America, St. Louis, May 19-20. Dr. M. J. Sandborn, Appleton, Wis., Secretary.

Rhode Island Medical Society, Providence, June 1. Dr. I. W. Leech, 111 Broad St., Providence, Secretary.

South Dakota State Medical Association, Huron, May 16-18. Dr. R. D. Alway, 423 S. Lincoln St., Aberdeen, Secretary.

West Virginia State Medical Association, Huntington, May 17-19. Dr. Robert A. Ashworth, Moundsville, Secretary.

Wyoming State Medical Society, Sheridan, June 20-21. Dr. Earl Whedon, Sheridan, Secretary.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Sixteenth Annual Meeting, held in Albany, April 18-20, 1922

(Continued from page 1419)

Possible Clinical Significance of Thyroid-Suprarenal Cortex Relationship

DRS. DAVIS MARINE and EMIL J. BAUMANN, New York: The clinical manifestations of very acute cases of exophthalmic goiter are almost identical with the clinical manifestations produced in rabbits by sufficient suppression of the cortical function. This makes possible a new conception of exophthalmic goiter. If the cortex can accelerate and inhibit thyroid activity, one must suppose that it is interrelated with many other gland activities in a similar manner, and there is abundant evidence that this is the case. We have been feeding fresh and dried suprarenal cortex in selected typical cases of exophthalmic goiter. Very encouraging results have been obtained from fresh cortex, while little or no improvement has been noted from the administration of the dried commercial preparations or those prepared by themselves.

Acute Anaphylactic Reactions Following the Intravenous Injection of Arsphenamin

DR. BURTON P. THOM, New York: Hypersensitiveness to organic arsenic in some patients and its absence in others can be explained only on the ground of idiosyncrasy. The possibility of shock following the intravenous injection of arsphenamin or any of its congeners must always be considered. Arsenic in itself possesses hemolytic power, and this hemolytic power is enhanced by using plain water or a saline solution which is hypotonic, or by improper use of the neutralizing agent, sodium hydroxid. If arsenic is to be given, the solution should always he isotonic. The water from which this isotonic solution is prepared should be doubly distilled, and it should not be more than four hours old when used. The sodium hydroxid solution should be of known strength and also freshly prepared. Neutralization should be exact—not guessed at. When it is being prepared, the solution should not be shaken too vigorously for too long a time, since its toxicity is much increased thereby. A concentrated solution of arsphenamin should never be given. A dose of 0.6 gm. of arsphenamin should never be given in less than 180 c.c. of water. I prefer neo-arsphenamin to arsphenamin. It is simpler to prepare, and thus the chances of error are reduced to a minimum. It can be given in concentrated solution. My preference is to give 0.9 gm. in 30 c.c. of water—the dilution of Thibierge.

Changes in Virulence in Tubercle Bacilli

DR. EDWARD R. BALDWIN, Saranac Lake: Methods for determining differences in virulence of tubercle bacilli have been unsatisfactory. There is need of a dependable method for making these determinations. We have devised a method based on guinea-pig inoculation. A culture of human tubercle bacilli, isolated thirty years ago, retains but slight pathogenicity at present. A culture isolated seventeen years ago is still quite pathogenic. A culture of bovine tubercle twenty years old is still very virulent for rabbits. A reliable method of estimating the presence or absence of virulent strains of tubercle bacilli would provide a valuable aid in prognosis. It must be remembered, however, that pathogenicity for rabbits and guinea-pigs may not be a measure applicable to man.

Improved Method of Applying Radium Through the Cystoscope

DR. LEO BUERGER, New York: Certain improvements in the cystoscopic armamentarium enhance the accuracy and increase the potency of intravesical radium therapy. In a certain field of carcinoma of the bladder, as good end-results are obtainable in the use of the cystoscopic method as with the combination of radium and surgery. The field for cystoscopic radium therapy is threefold: (1) for treatment of carcinoma alone without surgery; (2) for the treatment as a preliminary step to surgery, and (3) for the treatment of metastases. There are distinct circumstances that might lead one to adopt the cystoscopic methods of radium work, as (1) when the patient, by reason of his age, habits, special prejudices, knowledge of physical mediocrity, or what not, would refuse any operative interference, and (2) when we ourselves would deem surgical intervention contraindicated for one reason or another. We give cystoscopic radium applications preference (1) when the growth is small and appears amenable to radiation, but is so situated that an extensive operation compromising one ureter and requiring ureteral implantation would be the only correct surgical procedure; (2) when dealing with that type of small carcinoma hitherto successfully treated with snare and fulguration alone, but which is occasionally followed by local recurrence or invasion of the bladder wall; (3) because the growth is, in the main, a papillomatous one with evidences of carcinomatous change, and is small and readily accessible, but because of its potentialities for deep infiltration needs more intensive treatment than fulguration and the snare.

Open Air School for Children

DR. CLARENCE A. GREENLEAF, Olean: In Olean, a city of about 21,000, with the usual charitable institutions but no open air nutritional work, an active and well financed anti tuberculosis society was willing to build, equip and maintain an open air school. The interior is open to the roof, allowing ample air space. The color of the interior is light French gray. One half of the east roof is of wire glass; the southern exposure is of ribbed glass to the peak. The south and east sides below the plate line have double sash, clear glass with center swivel hinges. No shades are necessary. Each pupil has a locker. The desks are adjustable. There is a complete kitchenette and lavatory. Since this school was

opened, last September, the pupils have been given a morning and afternoon diet (milk with crackers or bread and butter) and a well balanced noon meal. Statistics furnish abundant evidence of the value of this plan in combating undernutrition among schoolchildren.

SECTION ON SURGERY

DR. GEORGE W. COTTIS, Jamestown, in the Chair

Cholecystitis; Its Relation to Infection of the Liver and Pancreas

DR. W. HOWARD BARBER, New York: Good clinical histories remain the most valuable means of interpreting gallbladder cases, but correlation of the histories with reliable experimental observations should increase our knowledge of the liver and pancreas. Experimental workers have found microorganisms in the gallbladder, liver and pancreas, and other healthy organs, while the presence of bacteria in the blood stream does not seem of itself to indicate a pathologic condition. Bacteria may remain latent in the gallbladder walls and become a source of reinfection of other tissues. Portal-carried infection is the most common, and explains the coincidence of cholecystitis with appendicitis, duodenal ulcer, splenic disease and other infections within the portal field. The spleen strains out many organisms, sending them to the liver for destruction. Infection of the gallbladder probably occurs by lymphatic extension. In every case of cholecystitis there is probably coincident hepatitis. The pancreas is infected from the liver, by way of the regional lymphatics. Associated pancreatitis probably exists in 25 per cent. of the cases of hepatic cirrhosis. Acute pancreatitis may be caused by bile-carried infection. From the standpoint of practical treatment, cholecystectomy is the operation of choice in cholecystitis. Drainage is preferably through the cystic duct.

Intestinal Obstruction

DR. ARTHUR M. DICKINSON, Albany: The decrease in mortality figures is small, chiefly owing to delay in diagnosis of the condition until after advanced toxemia has occurred. If the cases are treated in the first twelve hours, the mortality is only 5 per cent.; this increases to 12 per cent. in twelve hours, and 30 per cent. after twenty-four hours. Excluding paralytic ileus, the contributing causes may be volvulus, intussusception, bands, kinks, gallstones, malignancy, adhesions and the like. The symptomatology includes vomiting, first of gastric contents, then duodenal, then fecal material; pain, cramplike, aggravated by catharsis; and inability to pass flatus, the latter sign being of diagnostic importance. The higher the obstruction, the less the distention, and the more fulminating the case. In regard to treatment, it is better to perform a few useless laparotomies on live patients, than many operations on moribund ones.

DISCUSSION

DR. E. A. VANDER VEER, Albany: After diagnosis is made, operation is comparatively simple. Often the finding of the abdomen full of adhesions is due to unrecognized appendicitis. We do not see so many of these cases as formerly because of earlier diagnosis. We can sum up by saying, "When in doubt, go for the appendix."

DR. W. L. WALLACE, Syracuse: One diagnostic aid is the roentgen ray, which shows enormous coils of distended intestine, and absence of gas distention where the abscess exists. Another help is rectal examination in all cases of doubt. In many cases of obstruction with pus, the abscess can be opened through the rectum.

DR. J. E. SADLER, Poughkeepsie: I take exception to Dr. Wallace's statement that the roentgen ray is necessary. The history of the case, carefully considered, and careful physical examination tell the story. The trouble arises with the men who insist on giving the patient catharsis and watching the case. We must be responsible for a good deal more education of the men who bring cases to us before we can hope to lower the terrific mortality of this disease at the present time.

DR. T. L. DEAVOR, Syracuse: The more we refine our methods of diagnosis, the more we get away from the real condition. Instead of using laboratory facilities and the roentgen ray, let us operate at once for an acute surgical abdominal condition and save the patient.

DR. ARTHUR M. DICKINSON, Albany: I think that Dr. Wallace is right about the roentgen-ray diagnosis, but at present we see the patients so late that it is not fair to them to give a barium enema. In regard to diagnosis: the question is one for, or against, operation. We recognize a certain train of symptoms and make an exploratory operation at once.

DR. W. L. WALLACE, Syracuse: I want to correct a misapprehension: I do not give a barium enema. It is merely a matter of seeing the coils of intestine filled with gas. This can be done with a bedside unit in about a minute.

Causation of Symptoms Simulating Chronic Appendicitis

DR. HOWARD L. PRINCE, Rochester: There are many symptoms in chronic appendicitis outside the appendix itself. If headache, backache, nausea, dragging sensation on the right side, constipation and the like are not due to chronic appendicitis, what is the cause? The appendix to cause symptoms must suffer obstruction as a hollow viscus, or must have inflammation. A good barium examination is a great aid in diagnosis, taken with other findings, but one should not operate on this evidence alone. When urinary symptoms are supposed to be the result of appendicitis, one should look first for trouble in the urinary tract. Indigestion and flatulence may be due to poor habits or to organic or mental disease. A neuropsychiatrist can often cure these patients.

DISCUSSION

DR. W. D. JOHNSON, Batavia: We say "normal appendix," and then wait and see what happens to the patient. My rule is in an abdominal condition to look at the appendix last, and all the other organs first, so as to be sure not to miss anything. I open the abdomen in the midline to look for things that may be forgotten.

DR. JOHNSON, Albany: I had a history of chronic appendicitis when young, with right-sided pain in the lower abdomen. Later I had the appendix removed, but six months after the symptoms returned. I had a dizzy attack and fell, afterward vomiting pinkish material. I thought it was a matter of food infection. Examination revealed 3,000,000 red blood cells. How was it possible to diagnose duodenal ulcer, which proved to be the condition from which I was suffering?

DR. THOMAS JAMESON, Rochester: There are many appendix cases which are merely mental. In many cases of gastric crises of tabes, operation is performed as for appendicitis. It is important that a general exploration of the abdomen be made. I never do an appendectomy per se. I look over the whole abdominal condition. Many duodenal ulcers clear up after the appendix is removed. No man should operate with his mind fixed on only one thing. Every surgeon should approach the case with a judicial mind. This would insure fewer bad results following operation for chronic appendicitis.

Limitations of Roentgen Diagnosis

DR. RUSSELL D. CARMAN, Rochester, Minn.: Chemists and roentgenologists have made important contributions to diagnosis, but mistakes are still being made. The reasons are that the clinician relies on laboratory diagnoses without checking up by clinical findings. Reliance on roentgen-ray diagnosis sometimes leads to error. It is necessary to determine abnormality of shadows and to know normal variants. Roentgenography can exclude many conditions, but it cannot replace a proper clinical examination. The physician must retain his seat at the head of the council table, while bringing laboratory aids into a coherent unit. Of these, the roentgen ray, the test tube and the microscope constitute a powerful trinity.

Some Phases of Gallbladder Surgery

DR. WILLIAM D. JOHNSON, Batavia: Drainage of the gallbladder in the early toxemia of pregnancy relieves the vomiting. The bile was as thick as "jackwax" in the seven cases in which this operation was applied. One death occurred two weeks after operation with acidosis, although in this case the vomiting stopped within forty-eight hours. Toxemia

may be due to an incompatibility of fetus and mother. If the mother belongs to Group II, and the father to Group III, the case can be followed to see whether it is from such a union that toxemia occurs. Various important points are suggested in the surgery of deep jaundice: If it is desired to do cholecystogastrostomy or cholecystoduodenostomy, suture anastomoses should be avoided, as they run the risk of later oozing from stitch holes. A button anastomosis should be perferred, both the gallbladder and the stomach being perforated with the cautery. The pressure of the button will check hemorrhage. Use of the cautery along the edges of the incision will check oozing. In drainage of the gallbladder, the button is used, the drainage tube being attached to one part, the other part in the gallbladder, and the two parts being clamped together. This is used for the first stage operation. The outflow can be controlled by clamping the tube.

Should Gastro-Enterostomy Be Performed in Presence of Ruptured Duodenal or Gastric Ulcer?

DR. DONALD GUTHRIE, Sayre, Pa.: I sent out a questionnaire to 150 leading surgeons, asking: 1. Do you do gastro-enterostomy? 2. What are your postoperative results; do you have to reoperate later? 3. If you do gastro-enterostomy, what is the mortality? 4. Do you employ drainage; how long do you leave it in? To Question 1 there were four classes of replies: Twenty-two men do gastro-enterostomy as a routine; sixty-four men do not perform it; thirty-four men gave a qualified affirmative; twenty-nine men gave a qualified negative. The last two groups were very conservative in tone. To Question 2, fifty-seven reported that it was not necessary to reoperate; fifty said that it was necessary to reoperate. To Question 3, various mortality rates were given —from 0 to 60 per cent.—some believing that gastro-enterostomy increases the mortality. To Question 4, 137 answers were received; 101 men use drainage; twenty-three men mention suprapubic drainage. Drainage periods are from twelve hours to twelve days. Deaver says that he does gastro-enterostomy, but states that it should be done only by a skilled surgeon. The difficulty with this statement is that few men will admit they are not skilled surgeons, and try, therefore, to follow the dictates of the master. The Mayos believe that gastro-enterostomy is simply an emergency operation. Their postmortem studies show ten cases in which gastro-enterostomy would not have saved the patient. Most surgeons think it is not wise to do gastro-enterostomy at the same time as the closure, but that it may be done later, when there will be two safe operations, instead of one risky one.

DISCUSSION

DR. W. D. JOHNSON, Batavia: There are always some men who "always do some one thing," or "always do not do something." Some fellows say they always give nitrous oxid anesthesia; the only time they do not is in the operating room. This does not make the question more simple. I asked one surgeon what he did in late cases. He said, "I do not operate in late cases." The man who explores the abdomen with the dictum of some one else to guide him will go astray. One word about drainage: In early cases there is chemical peritonitis; in later cases the patients have bacteriologic peritonitis, so that after twelve hours they need drainage. Morrison's pouch is a fairly safe place to drain. You can get a soft tube down over the brim of the pelvis and turn the patient over on his right side and get postural drainage.

DR. THOMAS JAMESON, Rochester: What about different types of ulcers? If we deal with old, chronic, scar tissue ulcer, which suddenly perforates, I believe that gastro-enterostomy should be done. With the embolic type, in which the patient suddenly collapses without previous symptoms, which is due to sudden embolic blocking, that certainly does not need gastro-enterostomy, but simple closure. I don't believe that there is a routine measure. We must use individual judgment and save the patient. We must remember that the ascending colon acts as a temporary dam and shuts off the abdomen from the irritating fluid. If a drain is inserted at once into the flank, the fluid can be got rid of without the use of sponges. In old calloused ulcers, after closing the perforation, one can change clothes and use clean instruments and do a gastro-enterostomy. With the drainage from the stomach the patient begins to improve.

DR. EUGENE POOL, New York: In considering the mortality in these cases, of fifty-seven patients operated on last year, thirty-six had been operated on within six hours, and nine had a gastro-enterostomy done in addition to closure. There were no deaths. In the cases in which operation was performed from twelve to twenty-two hours after, the mortality was 10 per cent. The type of operation made no difference in the early cases. The late cases have a high mortality anyway, and one cannot do a gastro-enterostomy. The cases were followed for seven years, and in ten we found some barium retention, and a second operation was needed. Seven were operated on again and did well; the others refused reoperation. The others needed no further operation. Thus it would seem that if we perform gastro-enterostomy, we shall subject two thirds of the patients to unnecessary operation. The one third who need it later can have a secondary operation at some future time. It is very difficult to say on which side of the pylorus the ulcer lies. In regard to drainage, the early cases do not need draining of the peritoneal cavity. In all cases, one should drain to the peritoneum because of the irritant action of the extravasated gastric fluid, which causes the superficial wounds to break down.

DR. T. L. DEAVOR, Syracuse: It would be a delicate thing to suggest to some men that they are not skilful, but they should be warned against attempting to do as much as Deavor does at one sitting. There is one symptom of ulcer that is never seen in appendicitis, which is the tendency of the patient to rest his stomach against a bureau or table if he can. We do not do a routine gastro-enterostomy. In several cases I did not do a closure, but applied an omental graft. The patients did well and had no symptoms after. There was too much induration for closure. I would rather take a chance with suprapubic drainage than not drain at all. A suction apparatus is useful. One can draw out the pus and leave the cavity dry.

DR. DONALD GUTHRIE, Sayre, Pa.: This paper deals with duodenal perforations and not with gastric ulcer. In regard to closure, we often see Nature's work in closing with omentum, and feel almost ashamed to pull and tug at the closure. In our series we had thirty-one cases with simple closure, which did well. We had seven deaths and four recurrences. In regard to the type of operation: The self-preservation instinct is a strong one, and I do not believe I should allow any man to do a Finney operation on me, unless it were Finney himself. With gastro-enterostomy, there are two or three hundred good surgeons to whom I should submit; but, if I were yelling with pain, I should want the ulcer closed as quickly as possible and get it over. I cannot bring myself to do a gastro-enterostomy as a routine. If the patient died, I should never forgive myself. Radical procedures are followed by occasional operators, but we must not believe it a good routine practice to do gastro-enterostomy at the time of closure.

Mixed Tumors of the Parotid and Their Treatment by Radium

DR. F. MCN. JOHNSON, New York: These tumors are of three types: benign adenoma, malignant adenocarcinoma and mixed tumors. The first grows slowly, is encapsulated in the gland, and arises from acini or glandular ducts. Occasionally, malignant changes are seen. The second type develops rapidly; sometimes they metastasize; sometimes they contain cysts; if very malignant, they are solid. The third type probably arises from embryonal remnants. In treatment, radium has not been used very constantly. Radium always acts on the same tissues in the same way; therefore, they probably behave as do other tumors of the same types. In these tumors, deep penetration can be used without destroying the skin and without injury to the cranial nerves. Radium may be used to get good results in cases very unfavorable for surgery.

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Public Health, Chicago

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Symposium on Motion Pictures. E. G. Routzahn, C. E. Turner, S. Osborn, E. Stuart, C. Ellis, E. C. Meyer, H. E. Kleinschmidt and P. P. Jacobs.—p. 269.
Symposium on How to Further Progress in Health Education and Publicity. E. G. Routzahn, W. F. Snow, C. Dinwiddie, W. L. Dealey, M. S. Routzahn, B. R. Rickards, M. L. Rose, L. Marcus and W. A. Evans.—p. 279.
Food and Health. H. C. Sherman, New York.—p. 294.
Healthful Home. I. S. Wile, New York.—p. 295.
Chemical and Biologic Reactions in Dorr-Peck Tank. A. M. Buswell, A. A. Brensky and S. L. Neave, Urbana, Ill.—p. 299.
Community Organization in Antituberculosis Campaign. G. J. Drolet, New York.—p. 311.
Objectionable Forms of Penny Candies. C. H. LaWall.—p. 318.
Treatment of Swimming Pool Water with Ultraviolet Rays. W. F. Walker, Detroit.—p. 320.
Dental Work as Prophylactic Measure in Improving Physical Condition of Employees. T. P. Hyatt, New York.—p. 325.
Diphtheria Control. B. E. Roberts.—p. 328.

Archives of Occupational Therapy, Baltimore

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Psychiatry and Occupation. E. B. Saunders, Towson, Md.—p. 99.
Diversional Occupation Always Therapeutic. L. J. Haas, White Plains, N. Y.—p. 115.
Occupational Therapy as Applied at Eudowood Sanatorium. M. F. Sloan.—p. 121.

California State Journal of Medicine, San Francisco

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*Suprapubic Versus Perineal Prostatectomy. F. Hinman, San Francisco.—p. 113.
Differential Diagnosis of Eczematoid Diseases. S. Ayres, Los Angeles.—p. 116.
Oral Foci of Infection, Their Diagnosis, Differentiation and Systemic Manifestations. R. Burns, Jr., San Francisco.—p. 120.
Clinical Aspects of Pneumonia. H. H. Lissner, Los Angeles.—p. 124.
*Unusual Complications in Case of Middle Ear Infection. I. H. Jones, Los Angeles.—p. 126.
Treatment of Hunner's Ulcer of Bladder by Fulguration. H. A. R. Kreutzmann, San Francisco.—p. 128.
Radical Mastoid Operation Under Local Anesthesia. H. B. Graham, San Francisco.—p. 130.
Pyelonephritis: Review of 100 Cases. O. C. Foote, San Pedro.—p. 131.
Unusual Forms of Acute Poliomyelitic Paralysis. W. F. Schaller, San Francisco.—p. 133.

Suprapubic Versus Perineal Prostatectomy.—A comparative study of 134 cases made by Hinman shows that Young's perineal prostatectomy excels the suprapubic operation in every respect. It has given a lower mortality, 2.2 per cent., as against 15 per cent.; and a higher percentage of cures, 83 per cent. as against 38 per cent., even in spite of the handicap of less promising material. Recto-urethral fistula, persistent perineal fistula and incontinence have been absent in all later cases and at no time troublesome. The generally poor results that have been reported for Young's perineal prostatectomy are, in Hinman's opinion, directly blamable to the inexperience of the operator rather than the fault of the operation. Properly performed, Young's is an ideal surgical procedure, but presents two types of technical difficulty—the anatomic approach and the acual glandular enucleation. Errors in the first lead to injuries of the rectum or external sphincter; in the second, to structural defects, with either persistence of prostatism or its recurrence. Prevention of surgical errors in the anatomic approach comes by experience and a knowledge of the anatomy of the perineum; prevention of the structural defects is best secured by a complete, clean removal of the hyperplasia. This is simpler and more certain by the modified method of enucleation whereby the hyperplastic mass can be accurately dissected out intact under direct control of the eye. In the twenty-five cases in which this perineal *en masse* enucleation has been used, the immediate and later results have been most gratifying, 100 per cent. functional cures.

Unusual Complications in Middle Ear Infection.—Jones' case presented an apparently mild otitis media, violent labyrinth irritation and a very large postauricular abscess.

Canadian Medical Association Journal, Toronto

April, 1922, **12**: No. 4

Embryology and Physiology of Colonic Stasis. G. E. Armstrong, Montreal.—p. 197.
Next Great Advance in Medicine. A. B. Macallum.—p. 202.
Glimpses into Endocrinology. W. F. Hamilton, Montreal.—p. 209.
History in Tuberculosis. H. C. Parsons, Toronto.—p. 216.
*Toxic Goiter; Effect of Thyroidectomy on Basal Rate, Pulse Rate and General Nutrition. E. M. Eberts, Montreal.—p. 219.
Cancer Problem. H. A. Bruce, Toronto.—p. 225.
Thyroid Function from Chemical Viewpoint. A. T. Cameron, Winnipeg.—p. 229.
Acute Appendix. W. Jamieson, Hamilton, Ontario.—p. 232.
Favus: Seventeen Cases. H. A. Dixon and A. H. Rolph, Toronto.—p. 235.
Intubation vs. Tracheotomy. J. M. Rogers, Ingersoll, Ont.—p. 238.
Uterine Hemorrhage from Viewpoint of General Practitioner. F. A. L. Lochhart.—p. 240.
Nephrolithiasis, Pyonephrosis and Impacted Urethral Calculus in Boy Four Years of Age. H. C. Cassidy.—p. 246.
*Case of Anus Vestibularis; Reconstruction with Successful Result. R. O'Callaghan, Calgary.—p. 246.

Effect of Thyroidectomy on General Nutrition and Pulse Rate.—In none of fifty consecutive cases of thyroidectomy analyzed by Eberts has the procedure failed to eliminate hyperthyroidism, reduce the pulse rate to normal limits, and restore body weight. To secure this uniformity in results, it is essential that all hyperplastic cases should remain at rest for three months after operation. To maintain these results, a much longer period may be essential in those cases in which the inital toxemia has been severe and accompanied by profound nutritional disturbances, or where the intoxication, though comparatively mild, has persisted for several years. Permanency in results in hyperplastic goiter is dependent, apart from postoperative rest, on the performance of a radical operation. Approximately from three fourths to four fifths of the total bulk of the gland should be removed. When an insufficient amount of tissue from both lobes and isthmus is removed, hypertrophy of the residue may take place. Ligation and lobectomy should be considered as "stage" operations, and as having but temporary effect. They may be indicated in high rate cases as a means of bringing the rate within safe bounds, and also serve as tests of the patient's stability. With the broadening of experience and improvements in technic, however, "stage" operations in hyperplastic goiter are less frequently indicated. Having the various clinical features accurately assessed in each case, the time chosen for operation is the most important single factor in the conduct of the case. The best results are to be secured by early operation, before toxic saturation has been reached; that is, before exophthalmos is pronounced, before grave nutritional changes have developed (loss of weight and strength), and before the myocardium has been seriously damaged. Of the residual symptoms, exophthalmos and myocarditis are the most pernicious. Clinical observations suggest that a carbohydrate-fat dietary promotes nutritional repair more rapidly than a diet in which proteins are freely allowed, and that this may be explained on the basis that proteins favor the perpetuation of hyperthyroidism, by supplying the necessary elements for the synthesis of thyroxin. This theory, while at first applied in the treatment of convalescent patients, is now being tested as a means of lowering the basal metabolic rate before operation is undertaken.

Anus Vestibularis Operated for After Nine Years.—O'Callaghan reports the case of a girl, aged 9, who was born with an imperforate anus. Examination revealed a small fistulous opening in the lower end of the vestibule. After consultation, it was thought advisable to wait until later if no serious symptoms arose. The mother changed her residence and since that time, nine years ago, the child has had no attention. The bowels have never moved normally. About once a month she would have a desire to defecate and would roll on the floor in great pain and straining the girl would pass hard pencil-shaped feces. The abdomen increased in size and the attacks of pain became more frequent; while the passing of fecal matter took place at longer intervals and with greater pain. Symptoms of partial obstruction, vomiting, pain and fever developed. The condition was one of anus vestibularis, the opening so small that it would not admit a lead pencil. Splitting the perineum from posterior wall well down toward the

coccyx and dissecting free this wall it was brought down and fixed to the skin margin. The child six months later was in excellent health, her bowel movements daily with complete control indicating that colon was evidently getting back its lost tone.

Colorado Medicine, Denver

April, 1922, **19**, No. 3

Anatomic and Functional Differences of Germ and Somatic Cell. G. A. Boyd, Colorado Springs.—p. 75.
Coincidence of Gallstones and Kidney Stones in Same Patient. L. Freeman, Denver.—p. 81.
*Early Diagnosis and Treatment of Cancer of Uterus. R. T. Frank.—p. 83.
*Trichomonas Vaginalis Vaginitis. J. B. Hartwell, Colorado Springs.—p. 86.

Radiotherapy in Cancer of Uterus.—Two points are emphasized by Frank, one is the growing tendency to reckless radicalism for "suspected malignancy." This tendency is strongly condemned. The other is radiotherapy. Hitherto hopeless cases can now be cured in some instances. Frank suggests that perhaps in the near future operation for uterine cancer may become unnecessary and obsolete. Early recognition and early treatment will, however, continue to be as essential as ever.

Trichomonas Vaginalis Vaginitis.—Most satisfactory results have been obtained by Hartwell in the treatment of these cases by placing sodium bicarbonate powder in the vaginal vault. The following morning the patient takes a douche of plain water. In the afternoon the treatment is repeated. Daily treatments are required for about two weeks and every second day for another four weeks before the vagina is free from trichomonades. The principle of treatment is to maintain the reaction of the vagina strongly alkaline, which alkalinity seems to be inimical to the life and growth of *Trichomonas vaginalis*.

Georgia Medical Association Journal, Atlanta

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Gallbladder Affections. F. K. Boland, Atlanta.—p. 127.
Recurrent Inguinal Hernia. C. H. Watt, Thomasville.—p. 131
Treatment of Amebic Dysentery G. M. Niles and H. N. Kraft, Atlanta.—p. 134.
Eclampsia. A. B. Patton, Athens.—p. 136.
Routine Examination of Chest. W. W. Jarrell, Thomasville.—p. 138.

Iowa State Medical Society Journal, Des Moines

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Diseases of Blood-Vessels as Seen in Eye. E. Jackson, Denver.—p. 131.
Retinal Changes in Cardiovascular and Renal Diseases. J. E. Reeder, Sioux City.—p. 136.
Pneumococcus Peritonitis. V. F. Marshall, Appleton, Wis.—p. 138.
Diagnosis and Treatment of Infantile Paralysis. A. F. O'Donoghue, Sioux City.—p. 141.
Acute Infections of Abdomen. D. W. Ward, Oelwein.—p. 143.
Significance of Sacrococcygeal Dermoids in Relation to Rectal Diseases. A. P. Stoner, Des Moines.—p. 145.

Johns Hopkins Hospital Bulletin, Baltimore

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Immunologic Reactions of Bence-Jones Proteins. II. Differences Between Bence-Jones Proteins from Various Sources. S. Bayne-Jones and D. W. Wilson, Baltimore.—p. 119.
*Study on Experimental Rickets. XIX. Prevention of Rickets in Rat by Means of Radiation with Mercury Vapor Quartz Lamp. G. F. Powers and E. A. Park, New Haven, Conn., P. G. Shipley, E. V. McCollum and N. Simmonds, Baltimore.—p. 125.
Graphic Method for Calculation of Diabetic Diets in Proper Ketogenic-Antiketogenic Ratio. R. R. Hannon and W. S. McCann, Baltimore.—p. 128.
Alveolar and Blood Gas Changes Following Pneumectomy. G. J. Heuer and W. D. W. Andrus, Baltimore.—p. 130.
Posterior Resection of Rectum and Rectosigmoid (Kraske or Modified) under Regional Anesthesia. G. L. Labat, Paris.—p. 134.
*Use of Bone Graft in Treatment of Pott's Disease. W. S. Baer, Baltimore.—p. 140.
Suggested Modification of Wright Opsonic Technic Based on Differential White Blood Count. H. B. Cross, Baltimore.—p. 142.
*Dissemination of Bacteria in Upper Air Passages. II. Circulation of Bacteria in Mouth. A. L. Bloomfield, Baltimore.—p. 145.
Bacterial Nutrition. Growth of a Hemophilic Bacillus on Medium Containing Only an Autoclave-Stable Substance as an Accessory Factor. T. M. Rivers, Baltimore.—p. 149.
S. Bayne-Jones, Baltimore.—p. 151.
Rôle of Situation in Psychopathologic Conditions. E. L. Richards, Baltimore.—p. 152.
Presence of Nucleic Acid in Bacteria. A. J. Schaffer, C. Folkoff and

Prevention of Rickets by Exposure to Mercury Vapor Quartz Lamp.—Ten rats exposed to the radiations from the mercury vapor quartz lamp were killed after sixty-four days and were free from rickets both grossly and histologically. The beneficial effects of the radiations from the mercury vapor quartz lamp were not limited to the skeleton, since the condition of the rayed animals underwent a general improvement. The effects of the radiations of the mercury vapor quartz lamp on the growth and calcification of the skeleton of the rat and on the animal, as a whole, seem to be similar to, if not identical with, those brought about by direct sunlight and by cod liver oil.

Use of Bone Graft in Pott's Disease Not a Routine Procedure.—In Pott's disease Baer would resort to operative procedures only in selected cases, and simply as one of the aids in making a cure, but not as the chief means. Pott's disease is a pathologic condition which must necessarily run a very chronic course and its cure is accomplished only when amalgamation of the vertebral bodies is assured. This necessarily takes time. Mechanical means, therefore, particularly in infancy and in the growing child, must be the main method for stabilization of the vertebrae, and when the graft is used it is to be regarded only as an aid and must not be relied on alone. In infancy the operation is questionable owing to its magnitude and to the tendency which it has to weaken the system and thus favor the incidence of general tuberculosis and other infectious diseases. In this class of cases the ultimate, if not the immediate, mortality is high. In the growing period, from 6 to 16 years of age, in carefully selected cases the bone graft may be used, but must be considered only as an aid, and proper mechanical treatment must be kept up until the period of growth is over or amalgamation of the vertebrae has taken place. In adults the bone graft is indicated in the majority of cases, but even here mechanical support should be used for at least six months.

Circulation of Bacteria in Mouth.—The experiments described by Bloomfield show clearly that there is a definite mechanism whereby foreign organisms which enter the mouth are removed. Its essential feature is a direct and rapid transport of the bacteria toward the esophagus. It appears probable that the organisms are swallowed after reaching this point.

Journal of Biological Chemistry, Baltimore

April, 1922, **51**, No. 2

*Metabolism of Diabetes. R. M. Wilder, W. M. Boothby and C. Beeler, Rochester, Minn.—p. 311.
Interactions of Oxygen, Acid and Carbon Dioxid in Blood. A. V. Hill, Manchester, Eng.—p. 359.
Micromethod for Estimation of Ammonia in Blood and in Organic Fluids. K. L. Gad-Andresen, Copenhagen, Denmark.—p. 367.
Micro-Urease Method for Estimation of Urea in Blood, Secretions and Tissues. K. L. Gad-Andresen, Copenhagen, Denmark.—p. 373.
System of Blood Analysis. III. New Colorimetric Method for Determination of Amino-Acid Nitrogen in Blood. O. Folin, Boston.—p. 377.
Colorimetric Determination of Amino-Acid Nitrogen in Normal Urine. O. Folin, Boston.—p. 393.
Retention and Distribution of Amino-Acids with Especial Reference to Urea Formation. O. Folin and H. Berglund, Boston.—p. 395.
Necessity of Checking up Quality of Sodium Tungstate Used in System of Blood Analysis. O. Folin, Boston.—p. 419.
Colorimetric Methods for Separate Determination of Tyrosin, Tryptophane and Cystin in Proteins. O. Folin and J. M. Looney, Boston.—p. 421.
Free and Bound Water in Blood. B. S. Neuhausen, Baltimore.—p. 435.
*Proteins of Tomato Seed (Solanum Esculentum). C. O. Johns and C. E. F. Gersdorff, Washington, D. C.—p. 439.
Colorimetric Method for Determination of Homogentisic Acid in Urine. A. P. Briggs, St. Louis.—p. 453.
Relation of Photosynthesis to Production of Vitamin A in Plants. J. W. Wilson, Providence, R. I.—p. 455.
Interaction Between Blood Serum and Tissue Extract in Coagulation of Blood. I. Combined Action of Serum and Tissue Extract on Fluorid, Hirudin and Peptone Plasma; Effect of Heating on Serum. L. Loeb, M. S. Fleisher and L. Tuttle, St. Louis.—p. 461.
Id. II. Comparison Between Effects of Stroma of Erythrocytes and of Tissue Extracts, Unheated and Heated, on Coagulation of Blood and on Mechanism of Interaction of These Substances with Blood Serum. L. Loeb, M. S. Fleisher and L. Tuttle, St. Louis.—p. 485.
Unsaturated Fatty Acids of Egg Lecithin. P. A. Levene and I. P. Rolf, New York.—p. 507.

Metabolism of Diabetes.—The complete metabolism of a patient with severe diabetes is reported by Wilder et al. for a period of seventy-four days. The basal respiratory quo-

tients averaged 0.693, the highest quotient being 0.74, and the lowest 0.65. Nine experiments are reported on the immediate effect of food on the metabolic rate and respiratory quotient. The glucose tolerance varied inversely with the basal metabolic level, rising as the rate fell and vice versa. This behavior seems to indicate a definite interrelationship of the two. Diets high in fat, but low in protein and planned so that they contained nearly 2 gm. molecules of fatty acid to 1 of glucose, on two occasions, checked a dangerous and rising acidosis. The metabolism data of two days when the acidosis was minimal indicated actual ketogenic antiketogenic ratios in the metabolism mixtures of 1.53 and 1.78. It is suggested that the proportion of fatty acid which will completely burn with a limited amount of metabolizing glucose is not the same at all metabolic levels but may be increased by measures designed to depress the basal metabolic rate.

Proteins of Tomato Seed.—Analyses made by Johns and Gersdorff of five samples of tomato seed and press cake showed an average content of 36.91 per cent. protein. From seed of high germinating quality two globulins, a and B, have been isolated and analyzed. Analyses by the Van Slyke method show that the nutritionally essential basic aminoacids are well represented in these globulins. They are high both in arginin and lysin. The B-globulin contains also an unusually large percentage of histidin, but in the a-globulin the histidin content is low. Both globulins respond to the qualitative tests for tryptophan and tyrosin. Tests failed to disclose the presence of albumin and glutelin.

Journal of Industrial Hygiene, Boston

April, 1922, **3**, No. 12

Adequate Industrial Medical Service for Small Plant. C. P. McCord and D. K. Minster, Cincinnati—p. 363.
Metatarsophalangeal Fractures; Report of Twenty-Seven Cases. A. G. Bolduc, Bayonne, N. J.—p. 371.
Establishment of Dental Clinic. L. E. Hastings, Philadelphia.—p. 376.
Report on Investigation to Determine Hazard to Health of Operators Using Spraying Machine for Painting: Risk of Lead Poisoning. N. C. Sharpe, Toronto.—p. 378.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

April, 1922, **19**, No. 5

*Action of Salicylates on Uterus. J. W. C. Gunn and M. Goldberg.—p. 207.
Note on Adrenalin Hyperglycemia in Man. H. L. Ulrich and H. Rypins, Minneapolis.—p. 215.
Determination of Circulation Time in Rabbits and Dogs and Its Relation to Reaction Time of Respiration to Sodium Cyanide. A. S. Lovenhart, B. H. Schkomovitz and E. G. Seybold, Madison, Wis.—p. 221.
*Action of Potassium Salts on Medulla as Shown by Perfusion of Medulla of Terrapin (Pseudemys Troosti) with Potassium Salts. W. J. R. Heinekamp, Urbana, Ill.—p. 239.

Action of Salicylates on Uterus.—The action of sodium salicylate on the uterus was investigated by Gunn and Goldberg with a view to determining its possible influence in abortion. It was found to have a stimulating action in the uterus, but usually only in concentrations higher than those found in the blood during the treatment of rheumatic fever. It is suggested that abortion occurring in rheumatic fever is the result of the fever, and that salicylates have probably little effect unless the uterus is specially sensitive.

Action of Potassium Salts on Medulla.—Heinekamp found that potassium influences the cardio-inhibitory center of the terrapin, producing inhibition of the heart. Sodium salts and magnesium iodid were without effect.

Journal of Urology, Baltimore

April, 1922, **7**, No. 4

Atrophic Pyelonephritis. W. F. Braasch, Rochester, Minn.—p. 247.
*Physiology and Pathology of Ureter. W. C. Quinby, Boston.—p. 259.
*Effect of Saline Purgatives on Absorption and Excretion of Phenolsulphonephthalein. D. I. Macht.—p. 271.
*Pneumopyelography: Advantages and Technic. S. A. Thompson, New York.—p. 285.
Dissolution of Calculi in Renal Pelvis and Ureter. R. C. Bryan and R. D. Caldwell.—p. 295.
*Surgical Infections of Kidney. J. N. Baker, Montgomery, Ala.—p. 307.
Toxicity of Potassium Chlorid in Experimental Nephritis. F. P. Underhill and R. C. Ferguson.—p. 311.
Unilateral Fused Kidneys. A. Hyman, New York.—p. 321.
*Saligenin as Local Anesthetic for Cystoscopy in Men. A. D. Hirschfelder, A. G. Wethall and G. J. Thomas, Minneapolis.—p. 329.
Test Tube Holder for Collection of Ureteral Specimens. C. S. Levy, Baltimore.—p. 333.
Inexpensive Carrier and Receptacle for Ureteral Catheters. E. C. Schroeder.—p. 335.
Urologic Irrigator Sterilizer. A. B. Cecil, Los Angeles.—p. 337.

Physiology and Pathology of Ureter.—Quinby cites cases illustrative of the fact that an obstruction may be caused by the prostate which is accompanied by extreme degrees of renal damage and still the ureters remain normal. Such evidence leads strongly to the conclusion that whatever may be the fate of the ureter or of its valvular opening after infection has supervened, there is either no change in its histology or at most only moderate hypertrophy in clean cases. As regards the infected cases, evidence also exists that in some of these, too, there is but little change in the ureters. But in some instances of longer duration or of greater severity of infection, profound alteration with dilatation of the tube and destruction of its valvular opening are well known to occur. How can there by any "back pressure," in a physical sense, on a kidney whose ureter is normal anatomically, and the ureterovesical valve of which is apparently competent? asks Quinby. He sees no way of explaining these conditions other than by assuming the existence in man of the reflux of urine from the bladder upward into the ureters which happens experimentally in animals.

Effect of Saline Purgatives on Excretion of Phenolsulphonephthalein.—The excretion of phenolsulphonephthalein by the kidneys after its administration through the stomach tube in animals, Macht asserts, is delayed by the previous administration of saline purgatives in the same animal. The administration of saline purgatives through the stomach tube in animals produces also a delay in the excretion of phenolsulphonephthalein even after injections of that drug. The observations on animals have been confirmed also on a few human subjects and therefore invite a more extensive clinical investigation concerning the influence of saline purgatives on the excretion of phenolsulphonephthalein.

Pneumopyelography.—Pneumopyelography is endorsed by Thompson as being a simple, though uncommon, procedure, one which deserves a greater popularity. Its procedure is attended by apparently no reaction and causes the patient less discomfort than the injection of an opaque solution. In certain cases it is a greater aid in roentgenographic diagnosis, than the opaque solution.

Mistaking an Acute Pyelitis for Acute Appendicitis.—Close observation of more than seventy-five cases of pyelitis and ureteral stricture has convinced Baker not only of their frequent occurrence, but also, by reason of the close mimicry of other lesions, of the fruitlessness of many abdominal operations undertaken for their relief. In an analytical study made of fifty cases of pyelitis and ureteral stricture, it was found that seven patients had been operated on during an acute exacerbation for acute appendicitis. The pathology present in the appendix and remainder of the peritoneal cavity in no way accounted for the acuteness of the clinical symptoms; later postoperative studies revealed the true condition to be in the ureter and kidney pelvis. The similarity of the symptoms presented by an acute pyelitis or stricture to those of an acute appendicitis is striking. Yet by carefully considering, always, the possibility or probability of the retroperitoneal lesion, and by insisting on such a study of the upper urinary tract as the urgency of the case will justify, Baker says, the operator will, sooner or later, spare himself both chagrin and embarrassment.

Saligenin Anesthesia in Cystoscopy.—In ten cases in which 4 per cent. solutions of saligenin were instilled into the male urethra anesthesia satisfactory for cystoscopy was obtained, as was likewise the case in twenty cases in which 8 per cent. solutions were used. No unpleasant results were experienced in these cases. Hirschfelder et al. maintain that saligenin is a local anesthetic of very low toxicity which can be used satisfactorily for local anesthesia for cystoscopy in the male.

Kansas Medical Society Journal, Topeka

April, 1922, **23**, No. 4

Infant Feeding. E. G. Padfield, Salina.—p. 97.
Oidiomycosis: Coccidioidal Granuloma: Cutaneous Blastomycosis. C. R. Burkhead, Wichita.—p. 101.

Kentucky Medical Journal, Bowling Green

April, 1922, **20**, No. 4

Significance of Wassermann Reaction. L. K. Baldauf, Louisville.—p. 225.
Present Treatment of Syphilis with Especial Reference to Efficacy of Modern Methods. W. M. Brunet, Brooklyn.—p. 229.
Treatment of Neuro-Syphilis. H. J. Farbach, Louisville.—p. 235.
Treatment of Hernia. G. P. Grigsby, Louisville.—p 246.
Some Considerations of Pyelitis E. O. Grant, Louisville.—p. 253.
*Toxemia of Pregnancy with Eye Symptoms. S. G. Dabney, Louisville.—p. 260.
Carcinoma of Rectum: Case Report. S. C. McCoy, Louisville.—p. 263.
Mucous Colitis Due to Partial Intestinal Obstruction. H. N. Leavell, Louisville.—p. 265.
Diagnosis and Treatment of Some of Cardiac Arrhythmias. J. R. Morrison, Louisville.—p. 268.
*Torsion of Omentum: Case Report. F. Ritter, Louisville.—p. 276.
Placenta Praevia: Report of Two Cases. E. Speidel, Louisville.—p. 277.
Puerperal Eclampsia; Report of Case. T. J. Marshall, Bardwell.—p. 280.
Sarcoma of Eye. C. C. Maupin, Louisville.—p. 283.
Fibrosarcoma of Upper Jaw: Carcinoma of Cheek. J. G. Sherrill, Louisville.—p. 284.
Some Indications for Intravenous Use of Sodium Iodid. R. R. Elmore, Louisville.—p. 285.
Arsphenamin Dermatitis Exfoliativa: Case Report. W. J. Young, Louisville.—p. 288.
Psychasthenia: Case Reports. H. B. Scott, Louisville.—p. 289.

Toxemia of Pregnancy with Optic Neuritis.—Dabney reports what he believes was a case of optic neuritis with slight atrophy, due to the toxemia of pregnancy. Sight had become impaired during pregnancy, but at just what period the patient could not state. She had suffered from headache, nausea, swelling of the ankles, etc. She was delivered of a living child at about term; she had no convulsions, and made an uneventful recovery. Her urine was examined several times after delivery and found normal. Her vision at last examination was: right eye, 20/50; left eye, 20/70.

Torsion of Omentum.—For thirty-six hours Ritter's patient suffered from excruciating pain throughout the abdomen, especially in lower portion. There was nausea but no vomiting. At operation the omentum was found with its free end twisted by four or five complete corkscrew turns into a cylindrical tapering mass about 6 inches long and 1½ inches in diameter. Efforts to untwist same were unsuccessful. It was covered with inflammatory exudate, and on separating the corkscrew turns beginning gangrene and necrosis were noted. The mass was amputated after ligating the healthy omentum proximal thereto. The patient made an uneventful recovery.

Maine Medical Association Journal, Portland

April, 1922, **12**, No. 9

Radiotherapy and Electrocoagulation in Treatment of Malignant Disease. G. E. Pfahler and B. P. Widmann, Philadelphia.—p. 245.

Medical Record, New York

April 15, 1922, **101**, No. 15

Reeducational Treatment of Confirmed Stammerers. L. P. Clark, New York.—p. 609.
Neurasthenia: Its Treatment by Massage and Kinesitherapy. D. Graham, Boston.—p. 613.
Physical Treatment of Forms of Arthritis. W. B. Snow, New York.—p. 617.
Heretofore Unknown Menace Inherent to Therapeutic Serums. F. Herb, Chicago.—p. 620.
Successful Treatment of Pulmonary Tuberculosis in First and Second Stages. J. Z. Taylor, Baltimore.—p. 622.
Real Danger in Present-Day Cases of Blennorrhea of New-Born. W. Mehl, Buffalo.—p. 623.
Pedicled Flaps Aided by Free Fat Transplantation. W. Van Hook, Chicago.—p. 625.
New Ideas on Causation of Varicose Veins, Leg Ulcers and Pruritus Ani. G. E. Barnes, Herkimer, N. Y.—p. 626.
Homigrade Thermometer. F. E. Aspinwall, Wilseyville, N. Y.—p. 627.

April 22, 1922, **101**: No. 16

Present Day Tuberculosis Problem in Europe and in United States. S. A. Knopf, New York City.—p. 651.
Arsenical Pigmentation of Skin. D. W. Montgomery and G. D. Culver, San Francisco.—p. 655.
Dislocation of Semilunar Bone of Wrist. Report of Case. I. Cohen, New York.—p. 656.
Case of Multiple Osteomyelitis. J. T. Newman, New Haven, Conn.—p. 659.
Critic of Modern Roentgen-Ray Therapy in Cancer. M. J. Sittenfield, New York.—p. 660.
Résumé of Vaccine Therapeutics. E. C. Laverty, Louisville.—p. 663.
Modern Healing of Mastoid Wounds: Its Relation to Mastoidectomy and Postoperative Dressings. H. B. Blackwell, New York.—p. 666.
Reports of Seven Cesarean Sections: Five for Eclampsia and Two for Contracted Pelvis. W. L. Dunning, Newburgh, N. Y.—p. 667.
Diagnosis of Hernia of Ovary and Tube. L. F. Watson, Chicago.—p. 668.
Case of Stone in Posterior Urethra. L. Michel, New York.—p. 669.

Military Surgeon, Washington, D. C.

March, 1922, **50**, No. 3

Surgeon and Operator. A. P. C. Ashhurst, Philadelphia.—p. 237.
Prevalence of Syphilis in China Expedition, 15th U. S. Infantry. R. E. Houke.—p. 251.
Prevention of Extragenital Chancres in Army, Based on Study of Syphilitic Registers on File at Army Medical Schools. J. S. Lambie.—p. 261.
Modification of Wassermann Test. R. E. Houke.—p. 278.
Milk Borne Epidemic of Typhoid at Fort McPherson, Ga. A. T. Cooper, N. F. Curtis and R. Skelton.—p. 283.
Theory of Disinfection. L. T. Fairhall.—p. 295.
Report of Outbreak of Typhoid at Jacobstown, New Jersey, August, 1921. S. J. Turnbull.—p. 306.
Study of 2,400 Cases Presenting Cardiovascular Symptoms, Accepted for Military Service. R. Brooke.—p. 310.
History of Military Medicine. F. H. Garrison.—p. 318.
First Determination of Aortic Aneurysm in Living Subject by Military Surgeon. A. N. Tasker.—p. 338.
So-Called Deadly Bullet. R. A. Foster.—p. 343.

Missouri State Medical Association Journal, St. Louis

April, 1922, **19**, No. 4

*Hirschsprung's Disease; Report of Case. L. Rassieur, St. Louis.—p. 139.
Problems in Massive Dose Roentgen-Ray Therapy—Newer Method of Application and Measurement. E. C. Ernst, St. Louis.—p. 144.
Present Status of Tuberculin Therapy. A. C. Henske, St. Louis.—p. 149.
Early Diagnosis of Pulmonary Tuberculosis. S. H. Snider, Kansas City, Mo.—p. 155.
General Anesthesia. W. E. Handley, Springfield, Mo.—p. 159.
Smallpox and Vaccination. G. Dock, St. Louis.—p. 163.
Suppurative Diseases of Paranasal Sinuses with Particular Reference to Diagnosis and Treatment. E. R. Van Meter, St. Louis.—p. 171.
Epithelioma of Glans Penis. Report of Case. R. C. Lonsberry, Springfield, Mo.—p. 176.
Bacteriology and Influence on Medicine and Surgery. T. R. Frazer, Commerce, Mo.—p. 178.

Case of Hirschsprung's Disease.—Rassieur has made a very complete gross and microscopic study of the bowel in a case of Hirschsprung's disease in which the colon presented a kink 7 cm. from the beginning of the cecum; a second at the hepatic flexure; a third at the splenic flexure; a fourth in the middle of the descending colon; a fifth at the end of the descending colon. No valves or tumors could be made out at any of the kinks. Rassieur believes that when the first kink became effective the descending colon became dilated. As it increased in every diameter it no longer found room in its normal position. Its position therefore changed. Then the third kink caused the dilatation of the transverse colon. As it increased in all its diameters it no longer could maintain its normal location. With the change of location, the transverse colon developed the fourth kink at the hepatic flexure. After the same manner the second and the fifth kinks, and the cecal dilatation developed. The kinks were due to a change of the location of the bowel caused by the dilatation. The latter force seemingly caused lengthened mesenteries. Where the mesentery did not lengthen with equal rapidity, as at the hepatic flexure, the splenic, and the lower portion of the sigmoid colon, there a kink was formed. The process was most pronounced in the descending colon because here it had its inception. The clinical manifestations were first noticed soon after the baby was weaned.

New Jersey Medical Society Journal, Orange

April, 1922, **19**, No. 4

Scoliosis as Concerns General Practitioner. B. W. Moffat, New York.—p. 93.
Acute Surgical Abdomen. D. Miner, Jersey City.—p. 95.
Acute Medical Abdomen. H. S. Forman, Jersey City.—p. 98.
Primary Sarcoma of Gallbladder. H. I. Goldstein, Camden.—p. 100.

New York State Journal of Medicine, New York City

April, 1922, **22**, No. 4

*Resection of Bartholin's Glands. E. D. Barringer, A. W. Williams and M. A. Wilson, New York.—p. 145.
Epidemic Jaundice. H. Williams, Albany, N. Y.—p. 150.
Intestinal Flora in Infants. D. H. Sherman and H. R. Lohnes, Buffalo.—p. 155.

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Case of Streptococcus Hemolyticus Meningitis and Bacteremia; Operation and Recovery. Case of Severe Meningitis; Operation and Recovery. W. C. Bowers, New York.—p. 158.
Nursing Mother: Study in Lactation. F. H. Richardson, Brooklyn.—p. 161.
Feeding Sick Children. W. D. Ludlum, Brooklyn.—p. 165.
Place of Disorders of Conduct in Pediatrics. I. S. Wile, New York.—p. 168.
Diagnostic Value of Pupillary Symptoms in General Disease. M. L. Foster, New Rochelle, N. Y.—p. 171.
Optic Atrophy in Child Caused by Localized Meningitis Without Symptoms. H. L. Fifield, Syracuse, N. Y.—p. 174.
Homosexuality. C. P. Oberndorf, New York.—p. 176.
Surgical Considerations in Disease of Gallbladder and Bile Ducts. A. O. Wilensky, New York.—p. 180.
*Intermittent Spasm of Renal Artery. M. A. Rabinowitz, Brooklyn.—p. 181.
Cooperation of School and Health Authorities. J. E. Burke, Schenectady, N. Y.—p. 184.
Efficiency in Corrective Treatment in School Medical Inspection. J. W. Dimon, Utica, N. Y.—p. 186.

Resection of Bartholin's Glands.—Barringer et al. analyze a series of twenty-one cases to justify their recommendation to remove all diseased Bartholin's glands in every case of gonorrhea in the female. With three out of twenty chronic cases showing positive smears and cultures for gonococcus, they feel that this operation is justifiable and it is recommended as a matter of routine on a venereal service where there is opportunity to do it under proper surgical conditions. The chief danger is hemorrhage, which should be controlled carefully at the time of operation. The vaginal route is considered superior to the external one.

Spasm of Renal Artery.—The renal artery may undergo spasm as a result of local vascular trouble, or by way of irritation of the splanchnic nerves. Bilateral renal angeiospasm leads to diminished or complete cessation of urine formation. One of the two cases cited by Rabinowitz was an instance of bilateral renal angiospasm. The symptomatology of intermittent spasm of the renal artery will vary with the intensity, duration and frequency of the attacks, and as to whether one or both sides are involved. The attack may also be associated with localized angiospasms elsewhere—coronaries, cerebral, or peripheral vessels—or generalized vasospasm. The pain of unilateral renal arteriospasm may resemble superficially that due to renal colic, except that it is not as severe and the patient does not throw himself restlessly about in order to secure what might be a comfortable posture. Hyperalgesia of the eleventh and twelfth dorsal spinal segments may be found, particularly in the hypersensitive patients. The urine, if previously negative, will, after the attack, usually show abnormal elements—albumin, casts and red blood cells. If these elements, due to previous arteriosclerotic nephropathy, have already been present, they may be found increased after vascular crisis. The presence of new found or increased abnormal elements in the urine after the attack will depend to a great extent on the duration and severity of the renal ischemia produced. The more severe the ischemia the greater the renal pathology. Spasm of the renal artery being but a functional state, postmortem studies can only be of service in determining etiologic factors or in the exclusion of other diagnosis.

Northwest Medicine Seattle

April, 1922, **21**, No. 4

Pathology, Diagnosis and Surgical Treatment of Goiter. E. Goetsch, Brooklyn.—p. 97.
Technic of Operation for Goiter to Improve Postoperative Cosmetics. J. Hunt, Seattle.—p. 104.
Value to Surgeon of Basal Metabolic Rate in Toxic Goiter. J. E. Else, Portland.—p. 108.
Year in Europe. R. W. Matson, Portland.—p. 116.
Preparation of Cancer Patient for Operation. D. T. Quigley, Omaha.—p. 122.

Southwestern Medicine, Phoenix, Ariz.

April, 1922, **6**, No. 4

Management of Some Chronic Digestive Troubles. D. E. Smallhorst, El Paso, Texas.—p. 127.
Organotherapy. M. B. Culpepper, Carlsbad, N. M.—p. 132.
Diagnosis and Treatment of Hay-Fever. R. C. Young.—p. 134.
Treatment of Hay Fever with Arizona Pollens. E. W. Phillips, Phoenix.—p. 136.
Intranasal Pressure. S. G. Von Almen, El Paso, Texas.—p. 144.
Public Health. R. B. Durfee, Bisbee.—p. 146.
Treatment of Acute Peritonitis. J. A. Hardy, El Paso, Texas.—p. 149.
Tendon Transplantation in Forearm. R. D. Kennedy, Globe.—p. 153.
Case of Syphilis with Bone Lesions. D. C. Dodds, Albuquerque, N. M.—p. 154.

Surgery, Gynecology and Obstetrics, Chicago

April, 1922, **34**, No. 4

*Pancreatic Cysts and Pseudocysts. Case of Total Extirpation by Extraperitoneal Method. A. Primrose, Toronto, Canada.—p. 431.
Diagnosis and Treatment of Some Common Injuries of Shoulder Joint. R. W. Lovett, Boston.—p. 437.
*Diagnosis and Treatment of Tuberculous Empyema. C. A. Hedblom, Rochester, Minn.—p. 445.
*Gastric Hemorrhage. G. E. Armstreng, Montreal, Canada.—p. 466.
Growth Problems Following Osteomyelitis of Adolescent Long Bones. K. Speed, Chicago.—p. 460.
Deltoid Paralysis and Arthrodesis of Shoulder Joint. G. F. Straub, Honolulu, Hawaii.—p. 476.
Human Actinomycosis: Source and Mode of Infection. W. W. Mattson, Tacoma, Wash.—p. 482.
*Management of Acute Cranial Injuries by Early Exact Determination of Intracranial Pressure, and Its Relief by Lumbar Drainage. H. Jackson, Chicago.—p. 494.
*Analysis of End Results in Two Hundred Thirty-Two Hysteromyomectomies; Ovarian Conservation. J. C. Clark and C. C. Norris, Philadelphia.—p. 509.
*Relationship Between Histologic Structure and Biologic Activity of Goiter Tissue. F. de Quervain, Berne, Switzerland.—p. 513.
*Acute Pulmonary Edema in Labor. F. G. Corbin, Mendoza, Argentine Republic.—p. 517.
*Traumatic Fat Necrosis of Female Breast and Its Differentiation from Carcinoma. B. J. Lee and F. E. Adair, New York.—p. 521.
Some Plastic Operations. L. Eloesser, San Francisco.—p. 532.
Demonstration of Bladder Diverticula. H. L. Kretschmer, Chicago.—p. 558.
Operating Cystoscope in Application of Radium to Cancer of Rectum Following Colostomy. J. O. Bower, Philadelphia.—p. 539.
Treatment of Congenital Hallux Varus. A. MacLennan, Glasgow, Scot.—p. 540.
Amputation Stumps and Their Adaptation to Artificial Limbs. C. Bevrse, Boston.—p. 541.

Extirpation of Pancreatic Cyst by Marsupialization.—Primrose reports a case of pancreatic cyst discovered in a woman immediately after the birth of her child at full term. There was no previous history to indicate its presence; it was of large size, invading the pelvis, and was mistaken for an ovarian cyst. Total extirpation was done with complete recovery. The operation consisted in marsupialization accomplished by suturing an opening in the posterior parietal peritoneum to an opening in the anterior parietal peritoneum. The cyst wall was dealt with entirely outside the peritoneal cavity which had been shut off from the field of operation by the method described. Primrose believes that this method of uniting the opening in the posterior parietal peritoneum to the opening in the anterior parietal peritoneum has not hitherto been suggested or described in the treatment of pancreatic cysts. Hitherto it has been the wall of the cyst which was sutured in the process of marsupialization while in the method suggested and successfully carried out by Primrose the peritoneum alone is sutured and the cyst wall is not included in the process.

Tuberculous Empyema.—In twenty-three patients seen in the Mayo Clinic since 1910, the tuberculous nature of the empyema was proved. In thirty-eight others, the patient had a tuberculous infection, determined by pulmonary lesions, and by characteristic histories and symptoms in sixteen, in seven of which the diagnosis of tuberculosis of the pleura was made at operation from gross appearance. Two of the remaining nine patients died of tuberculosis. A presumptive diagnosis of tuberculous empyema was made in these thirty-eight cases. A past history of pleurisy with effusion is common in cases of tuberculous empyema. In many cases the effusion is serous at the onset. Tuberculous pleurisy may be primary, or it may be secondary to a pulmonary, peritoneal, or other tuberculous lesion. The onset of a tuberculous effusion may be insidious or it may be sudden and associated with an acute and severe constitutional reaction. A mixed pleural infection due to the perforation of a tuberculous cavitation often runs an acute and rapidly fatal course. The diagnosis of tuberculous empyema is made by demonstration of the bacilli in the exudate, by animal inoculation, or by examination of the sectioned pleura. A sterile effusion is probably tuberculous. An infected effusion may be tuberculous. The treatment of this condition is discussed in detail.

Blood Transfusion in Gastric Hemorrhage.—Whereas in ten or twelve cases of gastric hemorrhage seen and treated by Armstrong or his colleagues, operative treatment had failed, in two recent cases transfusion of whole blood, not citrated, was followed by recovery. Armstrong says it seems highly probable that the hemorrhage is the result of some infection.

Acute Injuries of Brain.—In most acute injuries of the brain, Jackson asserts, the cerebrospinal fluid pressure is a fair index as to the severity of the lesion. Dependable prognosis can be made by an increase or decrease of this pressure. A new clinical classification of injuries of the brain based on cerebrospinal fluid pressure alone, as shown by the mercury manometer, is superior to the accepted classification of concussion, contusion and compression. The pathogenesis of acute injuries of the brain demonstrates that the principal effect of the edema of the brain and hemorrhage is to interfere with the absorption of cerebrospinal fluid by the usual paths; this sets up a vicious circle causing further pressure on the brain by the accumulating fluid in the basal cisterns below the tentorium cerebelli and in the lateral ventricles which presses the brain upward against the dura and produces cortical anemia. The cortical anemia, if unrelieved, quickly leads to gliosis causing lasting changes in the character, disposition and mentality of the patient, if he recovers from the brain injury. The relief of the increased pressure on the brain and the reestablishment of the normal path of absorption of the cerebrospinal fluid can be obtained by repeated lumbar drainage—which in acute injury cases is absolutely without danger. Lumbar drainage is superior to subtemporal decompression in relieving pressure below the tentorium cerebelli and has the further advantage that it leaves no mutilating skull defect. The use of concentrated salt solutions intravenously lowers cerebrospinal tension but does not remove blood. Experiments on dogs, producing pressure on the cerebrum and on the medulla, show that the pulse, respiration and blood pressure are affected only when the medulla is compressed. Therefore, to wait for these changes as an indication for operation on the cerebrum in acute cranial injury is to court disaster.

Effect of Ovarian Conservation in Hysteromyomectomy.—An analysis made by Clark and Norris of 232 cases showed that hysteromyomectomy is productive of excellent end results whether or not ovarian conservation is practiced. Of all patients in this series, more than 99.5 per cent. were cured or improved, and more than 83 per cent. declared that their general health was good or improved one year or more after operation. Better end-results and greater comfort to the patient can be secured as the result of ovarian conservation. Everything being equal, better end-results follow the conservation of both ovaries than the retention of one, but one ovary is far better than none. Conserved ovaries seldom give subsequent trouble. Among 171 cases in which ovarian conservation was practiced, 261 ovaries were conserved, and in none of these patients was a second operation for the removal of the ovary necessary. That conserved ovaries may give subsequent trouble is conceded, as is also the fact that the series of cases quoted may have been unusually fortunate in this respect. Successful ovarian conservation depends on the condition of the ovary at the time of operation, the maintenance of an adequate blood supply, and the retention of the ovary in its normal position. The authors believe that undue emphasis has been placed on the frequency of cystic and other forms of degeneration in conserved ovaries, and that attention to the points mentioned will largely abrogate such disturbances. Each case should be individualized. The temperament of the patient should be studied, and a correlation of this with history and the pathologic process found at operation should determine the type of operation to be performed. Conserved ovaries functionate. Even in those patients in whom the ovary does not functionate permanently, the occurrence of the surgical menopause is less abrupt and severe than in those women on whom a bilateral oophorectomy has been performed. Among the former class of cases the artificial menopause generally resembles the normal menopause more closely than does that following the removal of both ovaries.

Biologic Activity of Goiter Tissue.—The results of deQuervain's researches and experiments on rats may be summarized as follows: Feeding rats with goitrous substance always causes an increased sensitiveness to lack of oxygen. The strongest was found with exophthalmic goiters containing a little colloid, and then in decreasing order with nontoxic colloid goiter, general parenchymatous enlargement (adenomatosis according to Wilson), adenomatous goiters from noncretins and the same from cretins. The injection of serum from thyroid veins produced in all cases a positive reaction, but less strong than did thyroid feeding. The order of succession was the same. The blood from veins of common goiters is distinctly more active than that of cretin goiters. Blood from the arm veins is distinctly active in the cases of colloid goiter and parenchymatous enlargement, but, on the other hand, not distinctly in cases of adenomatous goiters neither from noncretins nor from cretins. In three out of four cases of dwarf cretins with thyroid atrophy (without goiter) the blood from the arm produced a decrease in sensitiveness to lack of oxygen.

Acute Pulmonary Edema in Labor.—Corbin relates the history of a woman, aged 24, who ten minutes after the birth of a child manifested symptoms of imminent death from asphyxia. Incoordination between the pulse and respiration especially attracted attention. On auscultation vesicular respiration and innumerable crepitant and subcrepitant râles were heard through both lungs, while percussion was normal. A diagnosis of acute pulmonary edema was made. Ten minutes after the onset of these symptoms the woman began to cough at short intervals, while with each attack she brought up a mouthful of frothy, bloody liquid. In the next half hour she had coughed up 700 gm. of this liquid and at the end of an hour this measured more than a liter. This expectoration, which at first was decidedly bloody, became rose colored and finally clear and crystalline. In the afternoon the pulse was 90; no râles were heard. Corbin believes that the cause of the pulmonary edema was cramp or spasm of one of the heart cavities.

Traumatic Fat Necrosis of Mammae.—Lee and Adair maintain that traumatic fat necrosis of the female breast is a disease not infrequently encountered, and one which must always be differentiated carefully from carcinoma.

U. S. Naval Medical Bulletin, Washington, D. C.

April, 1922, **16**, No. 4

Medical Aspects of Gas Warfare. G. H. Mankin.—p. 641.
Alcohol Question in Sweden. J. S. Taylor.—p. 649.
Social Service Worker and Ex-Service Man. J. T. Bone.—p. 653.
Review of Reorganization of Sanitary and Public Health Work in Dominican Republic Under United States Military Government of Santo Domingo. R. Hayden.—p. 657.
Some Lessons of World War in Medicine and Surgery from German Viewpoint. W. S. Bainbridge.—p. 672.

Virginia Medical Monthly, Richmond

April, 1922, **49**, No. 1

Stricter Cleanliness in Surgery. S. Leigh, Norfolk.—p. 1.
Blood Pressure in Pregnancy. J. N. Upshur, Richmond.—p. 3.
Cancer Propaganda. J. W. Long, Greensboro, N. C.—p. 5.
Rectal Onanism: Report of Case. A. D. Ownbey, Newport News.—p. 9.
Spleen in Surgery. C. Williams, Richmond.—p. 10.
*Case of Siamese Twins. J. D. Collins, Portsmouth.—p. 14.
Uterine Fibroid Treated with Radium. J. J. Mundell, Washington, D. C.—p. 14.
Medical Ethics. D. Furman, Greenville, S. C.—p. 15.
Diagnostic Value of Analysis of Urine. A. L. Dodson and O. O. Ashworth, Richmond.—p. 22.
Acute Anterior Poliomyelitis. L. Davis, Roanoke.—p. 25.
Acute Perforation of Duodenal Ulcer. G. H. Bunch, Columbia, S. C.—p. 27.
Surgery of Chest During Twenty-Six Months in Military Service. J. C. Motley, Abingdon.—p. 30.
Surgical Treatment of Trigeminal Neuralgia. A. G. Brenizer, Charlotte, N. C.—p. 33.
Duodenal Ulcer and Cholecystitis. W. T. Vaughan, Richmond.—p. 34.
Paresis: Résumé of Treatment. J. T. A. Wright, Nashville, Tenn.—p. 38.

Siamese Twins.—The twins in Collins' case were full term and fully developed. Both were girls. They were united anteriorly from the umbilicus to the upper extremity of the sternum, the union consisting of a broad fusion of the bodies

beginning from a point one-half inch inside the nipple line of each side. The combined weight was 14 pounds. There was one cord and one placenta. The children were born dead.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Archives of Radiology and Electrotherapy, London

January, 1922, **26**: No. 8

*Case of Extreme Dilatation of Duodenum Due to Chronic Obstruction. R. E. Roberts.—p. 237.
*Effect of Roentgen Rays on Enzyme Action. R. D. Lawrence.—p. 244.
Case of Gallstones. C. Saberton.—p. 246.
Simple and Inexpensive Apparatus for Making Serial Radiographs of Pylorus and Duodenum Both in Horizontal and in Upright Positions. J. R. Riddell.—p. 249.
Polar Reversal in Muscle Testing. E. P. Cumberbatch.—p. 252.
Twenty Cases of Ulcer of Leg Treated by Electrical Methods. C. A. Robinson.—p. 253.
Roentgen-Ray Apparatus for Deep Therapy. W. E. Schall.—p. 258.

March, 1922, **26**, No. 10

Electrotherapy in Gynecology. A. Zimmern.—p. 301.
Stereoscopy. L. H. Clark.—p. 317.
Radium Applicator Forceps. C. P. G. Wakeley.—p. 324.

Extreme Dilatation of Duodenum.—A crescentic band of cicatricial tissue at the duodenojejunal flexure was the cause of the extreme dilatation of the duodenum present in Roberts' case. About 2 inches below this there was a hernial orifice in the mesentery of the jejunum, through which almost the whole of the remainder of the small intestine had passed, but there was no evidence of obstruction of the small bowel at any point other than the above.

Effect of Roentgen Rays on Enzymes.—Lawrence concludes that radiation has little, if any, effect on enzyme action.

Dublin Journal of Medical Science

February, 1922, No. 24

*Hemorrhagic Shock; Its Cause and Influence on Pregnancy. E. H. Tweedy.—p. 624.
*Three Cases of Peritonitis Treated by Radium. W. C. Stevenson.—p. 632.
Zinc Ionization and Zinc Electrolysis in Diseases of the Throat, Nose and Ear. A. R. Friel.—p. 640.

Cause of Hemorrhage Shock.—In discussing the causation of shock it seems to Tweedy that little attention has been paid to one of its earliest and most marked characteristics, namely, the almost universal relaxation of the unstriped and of the striped muscles as well. In no other way can the exaggerated inflation and drawing in of the cheeks during respiration in extreme shock be accounted for. The pupils open, the anus relaxes, the intestines dilate, the bladder expands, and Tweedy is of the opinion that the veins are also affected. At a later stage the vessel walls become pervious and permit the escape of plasma, thereby in all probability adding a further toxic element. This, however, does not account for the emptiness of the vessels during the earlier periods of shock. Increase in the caliber of all the veins as well as the capillaries would quite well account for this, and would also explain the absence of engorgement in the abdominal veins, for the increased capacity would make them appear comparatively empty, in spite of their containing an amount of blood not much less than their normal supply. The heart, which might be expected to retract on its diminished contents, appears on the contrary to dilate or, at all events, to become dilatable; many positive observations have demonstrated this fact, for instance, when saline infusion has been passed too rapidly into a vein. If elongation of muscle is a condition of shock it should be present to a marked degree in the uterus, which is the case in many instances. The possibility of a muscle in similar manner actually exceeding in length its normal limits or, in other words, undergoing a process the reverse of retraction has been suggested. Contraction is not interfered with by this overstretching, therefore the arteries contracted in shock are probably in a condition of "retraction reversed." Tweedy asserts that much that was formerly obscure is made clear by this concept, and one need no longer hold or teach the very improbable view that concealed accidental hemorrhage arises as the result of an atonic and enfeebled uterus, a uterus which could never mature a full term fetus, for sterility, abortion or rupture would occur as its inevitable result. Accidental hemorrhage is due either to toxemia or direct violence. If the blood fails to escape quickly, absorption of its poisonous products is followed by shock and dilatation of the uterus, while the plug, by holding back blood, may increase the severity of the symptoms. Hysterectomy with its 50 per cent. mortality is based on the supposition of a rotten unretracting uterus.

Radium Therapy of Peritonitis.—Favorable results are reported by Stevenson from the surface application of radium in two cases of peritoneal tuberculosis and one case of malignant and inoperable pelvic tumor, which was reported by the pathologist to be a colloid cancer.

Indian Journal of Medical Research, Calcutta

October, 1921, **9**, No. 2

*Correlation Between Chemical Composition of Anthelmintics and Their Therapeutic Values in Connection with the Hookworm Inquiry in the Madras Presidency. J. F. Caius and K. S. Mhaskar:
XI. Extractum Filicis Liquidum.—p. 191.
XII. Kousso.—p. 198.
XIII. Kamala.—p. 202.
XIV. Pulvis Arecae.—p. 206.
*Bacteriologic Investigation of Influenza. R. H. Malone.—p. 210.
Studies on the Flagellates of Genera Herpetomonas Crithidia and Rhynchoidomonas. VII. Some Miscellaneous Notes on Insect Flagellates. W. S. Patton.—p. 230.
Id. VIII. Note on Behaviour of Herpetomonas Tropica Wright, the Parasite of Cutaneous Herpetomonas (Oriental Sore) in the Bed Bug Cimex Hemiptera Fabr. W. S. Patton and S. Rao.—p. 240.
Id. IX. Note on Behavior of Herpetomonas Donovani Laveran and Mesnil in the Bed Bug, Cimex Hemiptera Fabricius. W. S. Patton, H. M. LaFrenais and S. Rao.—p. 252.
Development of the Leishman Donovan Parasite in Spleen Juice and in Alimentary Tract of Cimex Lectularius (Lin.). H. A. Adie.—p. 255.
Bacteriologic and Laboratory Technic. III. W. F. Harvey.—p. 261.
Behaviour of Paramecium Caudatum Toward Cinchona Alkaloids. H. W. Acton.—p. 339.
Infection with Nuttallia Ninense Among Hedgehogs in Northwest Frontier Province, India. J. A. Sinton.—p. 359.
Desiccated Nutrient Media. W. F. Harvey and K. R. K. Iyengar.—p. 364.
*Value of Wassermann Test. IV. Significance and Value of Positive Wassermann Reaction in Tuberculosis. K. R. K. Iyengar.—p. 369.
Conorhinus Rubrofasciatus (De Geer). P. R. Awati.—p. 371.
Geographic Distribution of Indian Rat Fleas as Factor in Epidemiology of Plague. F. W. Cragg.—p. 374.

Therapeutic Value of Anthelmintics.—Extract of male fern is not recommended as an anthelmintic by Caius and Mhaskar. It deteriorates readily and may easily be adulterated. Very little is known of the chemistry and pharmacology of the drug. Ninety minims is the admissible dose. Neither are kousso, kamala or areca recommended as anthelmintics.

Bacteriologic Investigations of Influenza.—Seventy-five per cent. of 175 specimens of the sputum or pharyngeal secretion of influenza patients examined by Malone during epidemics contained Pfeiffer's bacillus. The accessory respiratory sinuses of forty-one out of fifty-three subjects examined postmortem, contained pus. From this pus Pfeiffer's bacillus was recovered in thirty-four cases and sometimes in almost pure culture. The bronchi, bronchioles, consolidated lung tissue or pleural fluid was examined postmortem in thirty-nine cases. Pfeiffer's bacillus was found in 92 per cent.; most frequently in the bronchi or bronchioles and in the latter situation often in pure culture. Additional evidence presented of the causative rôle of Pfeiffer's bacillus in influenza is as follows: In the pharyngeal secretion of healthy persons obtained during the Bombay epidemic, Pfeiffer's bacillus could only be demonstrated in 18 per cent. of 138 specimens, while during the same months it was found in 75 per cent. of the sputum of influenza patients examined. In experiments with mice, rabbits and guinea-pigs, no lesions characteristic of influenza were obtained by inoculation with Pfeiffer's bacillus intranasally, intraperitoneally or intravenously.

Wassermann Reaction in Tuberculosis.—The serum of seventy patients suffering from tuberculosis was examined by Iyengar by the Wassermann test with the object of find-

ing out if this disease was responsible for a positive reaction. Forty were cases of pulmonary tuberculosis, fourteen were cases of tuberculosis of the lymphatic glands, and sixteen were cases of abdominal tuberculosis. Fourteen out of these seventy cases gave a positive Wassermann reaction, eight of the pulmonary group; three each of the glandular and abdominal group.

Japan Medical World, Tokyo

March, 1922, **2**, No. 3

*Relation of Vagus Nerves to Action of Sinus Venosus; Nature of Inhibitory Action of Heart Beat. K. Ohmori.—p. 61.
Fate of Amino-Acids Permeated in Red Blood Corpuscles. K. Hiruma.—p. 65.
Deformity of Vertebral Column and Treatment with Bamboo Corset. H. Iijima.—p. 68.

Nerve Mechanism of Heart.—Ohmori concludes that the automatic center of the heart beat is not situated in the contractile substance of the muscle. Whatever its mechanism may be, there is no question that it is situated between the muscle and the nerve. At this special mechanism autochthonous stimulation is produced and brings about the normal rhythmic beats. The vagus excitation causes frequent dissimilation stimuli at the automatic center, which interfere with the rhythmication of the automatic later center and produces the dissimilation paralysis. According to the relation of the rhythm by the primary stimulus, there is a time when there is no impetus and the heart muscle is relaxed (pause), or the rhythmic action becomes slow (negative chronotropic action), or there is accelerating action (positive chronotropic action). The decrease of the contractability or negative inotropic action may be due to the fact that while the automatic center has not started the stimulating action the muscle lost a part of excitability.

Lancet, London

April 8, 1922, **1**, No. 5145

*Metabolism: Research at Seaside. L. Hill and J. A. Campbell.—p. 675.
*Amebic Liver Abscess. L. Rogers.—p. 677.
*Ascending Infections of Kidney. K. M. Walker.—p. 684.
*Natural Cure of Common Cold. O. Heath.—p. 688.
Use of Colloidal Gold in Treatment of Neurasthenia. D. E. S. Park.—p. 691.
Case of Fracture of Atlas. E. U. Williams.—p. 692.
Case of Torsion of Hydatids of Morgagni. C. E. Shattock.—p. 693.
*Adenocarcinoma of Small Intestine. J. A. C. Macewen.—p. 693.

Metabolism at Seaside.—The observations recorded by Hill and Campbell were made at a seaside village. The Douglas-Haldane method of indirect calorimetry was employed. A few observations were taken of resting metabolism two to four hours after breakfast and after sitting quietly for half an hour in the open air or in a shed. The results were on an average of 34 per cent. above the basal metabolism measured in closed calorimeters, which is considered to be due mainly to the influence of the open air on body tone. The figures for metabolism obtained while bathing were five, six and seven times as high as the resting figures. Swimming accounted for a great part of this increase. Without swimming the metabolism was greatly raised by the cooling effect of the water causing shivering. The metabolism while paddling was, as a rule, higher than when walking the same distance at the same speed, probably owing to the fact that the water made the work heavier, although at the same time its cooling effect made paddling the more pleasant task. Other experiments were done walking along the sand, first wearing all clothes and a sweater, and secondly in a bathing costume.

Amebic Liver Abscess.—In closing his course of lectures on this subject Rogers reiterates that amebic or tropical liver abscess is an easily preventable disease in the great majority of instances, and the occurrence of amebic suppuration in the liver should cause serious questions in the mind of the medical man in whose hands it has been allowed to develop. In patients coming first under observation with an already formed amebic liver abscess, whenever possible, the treatment of election should be repeated aspirations and subcutaneous injections of emetin in preference to incision, while when such an abscess has eventually to be opened some form of sterile syphon drainage should be used. A little over a decade ago liver abscess was second only to typhoid in its lethal effects on the British soldier in India, causing nearly 100 deaths a year among them, but the death rate has already been reduced to one sixth by the methods Rogers has advocated.

Ascending Infection of Kidney.—Evidence is furnished by Walker which he claims is conclusive that the lymphatic route of infection must invariably be taken into account in considering the pathology of any renal infection. The kidney capsule is an important link in this lymphatic chain, and is the situation in which organisms are most consistently found in cases of ascending infection. In early cases of lymphatic infection of the kidney no organisms are found in the urine. There are reasons to believe that a tuberculous infection of the kidney may take place along a route precisely similar to that followed by pyogenic organisms. These conclusions lay stress on the importance of dealing with any form of infection, however trivial it may appear and they raise the question as to whether decapsulation might not occasionally be beneficial as a means of dealing with ascending infections. They suggest the possibility that repeated infection of the renal capsule may explain the origin of certain forms of chronic nephritis, and that decapsulation might not be without effect on the progress of such a condition.

Natural Cure of Common Cold.—The natural defense against a cold, Heath says, is as follows: On the first day, local exudation; on the second day, either local exudation, if the lesion is still small, or by fever if the lesion is larger. Cure may be effected by these methods in from forty-eight to seventy-two hours from infection, by taking reasonable outdoor exercise for one or two hours on the first or second day as the case may be. If fever supervenes, with sufficiently marked malaise to indicate it, rest for one day in bed is essential. If cure is not affected by one of these reactions, pus formation will occur, and the cure will have to take its own time.

Adenocarcinoma of Small Intestine.—In Macewen's case the patient, aged 20, was seized with violent pain in the abdomen and persistent vomiting. He had no previous illness save occasional "cramps in the stomach." The abdomen was much distended, tympanitic all over (but liver dulness normal) and very tender. The temperature was 100 F. Laparotomy was performed, and the abdominal cavity found to contain copious free fluid and liquid fecal matter. A tumor the size of a small walnut projected from the side of the upper ileum, and a small perforation was found at the base of the tumor, which was pedunculated, the pedicle being attached to the inside of the bowel. Apparently the tumor had caused ulceration of the wall of the intestine and had then been protruded through the aperture. A second similar pedunculated tumor was found in the intestine several inches lower down. The abdomen was rapidly cleaned out and enterostomy performed, but the patient died a few hours later. The tumor was an adenocarcinoma.

Medical Journal of Australia, Sydney

Feb. 25, 1922, **1**, No. 8

Human Isohemagglutinins: Their Distribution Among Some Australian Aborigines. A. H. Tetbutt.—p. 201.
Bone Grafts. H. R. G. Poate.—p. 209.
*Intussusception Limited to Appendix. R. D. McIntosh.—p. 216.

Intussusception of Appendix.—In the case reported by McIntosh there was complete inversion of a gangrenous appendix into the cecum; the inversion was strictly limited to the appendix.

March 4, 1922, **1**, No. 9

Cesarean Section. R. H. Morrison.—p. 229.
Cesarean Section. H. C. Lloyd.—p. 231.
Jean Paul Marat. C. MacLaurin.—p. 233.
Hymenolepis Diminuta in Human Hosts. G. H. Burnell.—p. 236.
Medical Treatment of Visceroptosis. R. A. Parker.—p. 237.
Post-Anesthetic Vomiting. V. MacDonald.—p. 240.
*Case of Rhinolith Presenting Unusual Features. R. Francis.—p. 240.

Rhinolith of Large Size.—The rhinolith in Francis' case measured, when pieced together, approximately 6.25 cm. (two and a half inches) in length and 2.5 cm. (one inch) in width and weighed approximately 12.8 gm. (215 grains). Examination suggested that the rhinolith in question proceeded from a blood clot in the nasal region which had become calcified.

Bulletins de la Société Médicale des Hôpitaux, Paris

March 10, 1922, **46**, No. 9

Graphic Control of Palpation Findings of Systolic Pulse Pressure. A. Mougeot and P. Petit.—p. 424.
*Diagnosis of General Paresis. R. Targowla and Badonnel.—p. 433.
Valvular Insufficiency Develops Under Mercurial Treatment. G. Caussade and A. Foucart.—p. 437.
*Oxygen in Pulmonary Tuberculosis. P. Armand-Delille et al.—p. 442.
*Spleen Sign of Incipient Tuberculosis. M. Villaret et al.—p. 445.
Vaccine Therapy of Congestion of Lung. Dufour and Ferrier.—p. 450.
*Emetin plus Iodin in Lymphogranulomatosis. Idem.—p. 452.
Quinidin in Arrhythmia. A. Clerc and P. N. Deschamps.—p. 453.

Early Diagnosis of General Paresis.—In Targowla's case, the sudden mental confusional syndrome in the woman of 38 improved under treatment, and it finally retrogressed completely. The cerebrospinal fluid, however, showed the characteristics of general paresis, and the course of the case confirmed that the confusional syndrome and insane tendency to wander away from home had been the first clinical manifestations of the otherwise latent paresis.

Oxygen in Treatment of Tuberculosis.—Subcutaneous injections of oxygen have been given systematically by Armand-Delille in treatment of thirty-two patients with pulmonary tuberculosis, and he tabulates the resulting changes. This treatment seemed to be absolutely harmless, while the metabolic findings indicate a stimulation of the resisting powers. He thinks that this method might be advantageously combined with others in treatment of tuberculosis.

Early Spleen Sign of Tuberculosis.—Villaret noted that the shadow cast by the spleen had increased in size in certain persons with vague physical disturbances. It proved later that this enlargement of the spleen was the first clinical sign of infection with tuberculosis, before there were any signs of lesions in the lungs. Nothing in the history of the cases could explain the enlargement of the spleen, but several in from two to four weeks afterward had hemoptysis. In others, various symptoms revealed the tuberculosis. The shadow of the spleen had returned to the normal outline by the fourth or fifth month in two thirds of the cases. Percussion now is negative, and at necropsy the spleen was usually of normal size. The enlargement seems to be an early reactional phenomenon from transient congestion of the spleen.

Subacute Inguinal Lymphogranulomatosis.—The lymph glands in the right inguinal region had developed several abscesses. The man of 28 had had syphilis and malaria, years before, both apparently entirely cured. The adenitis had resisted the usual treatment, but healed smoothly under emetin plus iodin. Seventeen injections of emetin were given, at first subcutaneously and then by the vein. Then a change was made to tincture of iodin, from 50 to 80 drops, in milk, by the mouth, daily, for thirty days. The cause of the adenitis is still a mystery; no portal of entry could be found. Latent tuberculosis seems most plausible.

Journal de Chirurgie, Paris

April, 1922, **19**, No. 4

*Operation for Cancer of Uterine Cervix. B. Desplas.—p. 337.
*Universal Craniotomy. G. Zorraquin (Buenos Aires).—p. 348.
*Wire Treatment of Certain Hernias. P. Moure.—p. 359.

Cancer of Uterine Cervix.—Desplas' illustrations show the various steps of the Wertheim method, and he discusses the indications, the technic and the after-care. In 85 cases in which this method had been applied before 1914, there were 21 survivals for over three years and 24 for less than this. He has operated since in 21 cases and there has been no recurrence in 2 that date from 1914, but there has been recurrence in 2 of the 4 that date from 1919, and 3 of the 7 from 1920. He does not ligate the hypogastric artery beforehand, as this does not prevent the uterine artery from bleeding while it reduces the resisting power of the pelvic zone involved.

Craniotomy.—Zorraquin declares that whenever it is necessary to relieve intracranial pressure we should follow Nature's example and make what is practically a large artificial fontanel in the bregma region, on the median line. He illustrates the technic for this, and extols the advantages of thus turning back a large bone flap where the skull is most safely opened. The physical and mechanical conditions here favor the intervention and reduce the by-effects to the minimum.

Wire Ring Treatment of Hernia.—Moure refers to umbilical and ventral hernias, and gives an illustrated description of the method he advises, which seems to be working finely. He runs a bronze wire around the opening, about 2 cm. back from the edge, after incising and retracting the skin. The edges are lifted up by an assistant with four forceps, one on each side, and the wire is drawn up tight and fastened, the metal ring thus formed holding the bunched tissues from spreading apart anew, and they form a fibrous plug which completely closes the old opening. The patients can get up early, which is a further advantage of this method. The wire "cerclage" has never caused pain, and, in his ten cases, there has been disturbance later in only two instances. It is easy to pull out the wire at any time after the parts have become solidly adherent.

Médecine, Paris

March, 1922, **3**, No. 6

Cardiovascular Pathology in 1922. P. Ribierre.—p. 405.
*Fever with Heart Disease. Vaquez.—p. 414.
Aviators' Heart. G. Etienne.—p. 420.
*Angina Pectoris. C. Pezzi.—p. 422.
*Spontaneous Slow Rupture of Heart. L. Ramond and E. Baudouin.—p. 426.
*Diagnosis of Cardiovascular Disease. A. Dumas.—p. 432.
Sclerosis of Pulmonary Artery. P. Ribierre and R. Giroux.—p. 437.
Radiology of Pulmonary Artery. E. Bordet.—p. 440.
Acquired Dextrocardia. E. Donzelot.—p. 445.
*Masked Phlebitis. Leconte.—p. 449.
Capillaroscopy. Weiss.—p. 455.
Diagnostic Import of Aleukemic Lymphocytemia. A. Clerc.—p. 457.
*Interstitial Diuretics. L. Blum.—p. 463.
*Gastro-Intestinal Uremia. A. Lemierre.—p. 467.
Anemia in Chronic Nephritis. C. Aubertin.—p. 473.

Fever with Heart Disease.—Vaquez declares that any rise in temperature in the course of any infection in a person with an organic lesion of the heart is liable to be an indication of superposed endocarditis, or at least of functional insufficiency of the heart, entailing infarcts, etc. These complications are usually not recognized at first; the infection runs its usual course, and not until several days later do the heart disturbances become manifest. The fever may persist after apparent recovery from the infection. By supervising the heart carefully we may be able to ward off insufficiency by beginning treatment with heart tonics at once.

Angina Pectoris.—Pezzi has encountered cases of angina pectoris without any retrosternal pain, merely the radiating pain in shoulder, arm and hand and in the muscles of the neck. There may also be reflex vasomotor or secretory phenomena or eructations. When there is no history of preceding attacks of angina pectoris, the diagnosis may be difficult, and yet this form is often particularly grave. Jonnesco's success with severing the nerve tracts conveying the pain suggests that medical means to reduce the sensitivity of the innervation in this region might be advisable, as reflex action, through this nerve, seems liable to maintain and aggravate the cardiac lesions. Quinin is useful here, he says; it has a sedative and paralyzing action on the center in the medulla oblongata for the pneumogastric nerve, on the nerve itself, and on the accelerators. It thus is an antagonist to epinephrin, and it may be regarded as a specific sedative for the vegetative nervous system. Hence it is particularly useful in angina pectoris, as has long been known although the mechanism of its action was not understood till recently. He gives tentatively up to 60 cg. or 1 gm. of quinin daily, fractioned, for a week, and then suspends for a week. The quinin sometimes gives remarkable results, reducing not only the pain and reflex phenomena, but even modifying the tachycardia which may accompany the angina pectoris tendency.

Spontaneous Rupture of the Heart.—Ramond suggests that it may be possible to suture the heart when the tear is of slow and gradual development. In thirty-two recently published cases, this slow development was known in 29 per cent., as also in a case personally observed. The symptoms in all forms are those of a hemopericardium.

Investigation of the Blood Pressure.—Dumas expatiates on the instructive information to be derived from comparison of the findings with the sphygmograph and the oscillometer applied both to the arm and the foot. He describes and interprets the dual findings in several groups examined, with or without a high blood pressure and lesions of heart or aorta.

Masked Phlebitis.—Leconte has found that attenuated, atypical phlebitis is as liable to be followed by embolism and other complications as the most pronounced form of the disease. It is even more likely to induce embolism as—not being recognized—immobilization of the limb is not enforced. Embolism may be the first sign of the phlebitis. This is particularly liable after childbirth and after abdominal operations. The latent phlebitis usually warns of its presence by slight chills, fleeting pains in one leg or iliac fossa, slight rise in temperature, and abnormal and persisting acceleration of the pulse. These symptoms should be heeded, and immobilization enforced. Syphilitic phlebitis is rare; the onset is insidious and palpation is the only means to reveal the hard slightly tender cord, nonadherent. Embolism is unknown with this, but it may have multiple localizations and recurrences. Vaquez' subacute venous septicemia is most common with a tendency to varicose veins. There may be intervals of a few months between the attacks, but the infection persists tenaciously, and one limb after the other may become involved. These are the cases in which the prolonged immobilization from fear of embolism entails so much atrophy of muscles, retraction of tendons, false ankylosis, etc. Phlebitis may occur with pain as the first symptom; this is especially likely in influenza, in rheumatism and early in tuberculosis. In other cases, phlebitis develops suddenly in consequence of physical strain, sometimes so slight as to escape the memory. Embolism is not known with this traumatic phlebitis, but the course is liable to be long and the use of the limb permanently impaired. This phlebitis from physical exertion may occur in the pregnant. It is possible that dystrophia of vessel walls may be responsible for this injury from physical exertion. This would explain the tendency to varicose veins and phlebitis in certain families.

Interstitial Diuretics.—Blum applies this term to diuretics which act by drawing fluid out from the interstices in the tissues, not by acting on either the heart or the kidneys. This group of diuretics includes the salts of potassium and calcium, and the chlorids are the most potent in this line. They are effectual in edema of all kinds except those for which the heart is responsible. In all noncardiac forms of edema, and with serous effusions, calcium chlorid is effectual. It has to be given in large doses, beginning with 15 gm. and increasing to 25 or 30 gm. daily. In chronic cases the effect may not be apparent for three or five days. It is indispensable to drop salt from the diet. The diuretic action is due to the displacement of sodium by the calcium. As the sodium is cast off, the water retained is cast off with it. Even with cardiovascular dropsy, the association of calcium chlorid with digitalis and theobromin is often useful, reenforcing the action of these drugs.

Gastro-Intestinal Uremia.—Lemierre remarks that the vomiting and diarrhea which sometimes accompany acute exacerbations of nephritis with edema are ascribed now to retention of sodium chlorid. The vomit and stools contain abnormally large proportions of salt. These disturbances appear and subside abruptly, but chronic digestive disturbances may be of another type, result of irritation from vicarious elimination through the digestive tract of nitrogen, and especially of urea, which the kidneys are incapable of taking care of. This gastro-intestinal uremia is a manifestation of retention of nitrogen in the blood. Whether of medical or mechanical origin, it may be the first sign of hitherto unsuspected kidney disease. Anorexia is the warning symptom; at first a loss of appetite only for meat and fish, but gradually the anorexia becomes complete for all foods. With intense uremia, nothing may be taken but a little water, and even this may be cast off by the stomach at once. The mouth is usually dry, the tongue thick and doughy, the breath fetid, or there may be excessive secretion of saliva with high urea content. In Renon's case, the output of urine and of urea in the urine dropped as the sialorrhea increased. The gastric dyspepsia from uremia has often been mistaken for cancer. Instances are known in which the digestive uremia proved fatal in two or three weeks. The kidney disease in these cases had been well tolerated until something occurred to upset the balance. The prognosis is grave, as a rule, unless it may be possible to break up the uremia by acting on a calculus or enlarged prostate, or to reduce the uremia within bearable bounds by improving conditions by bed rest, a fruit and vegetable diet, etc.

Presse Médicale, Paris

March 29, 1922, **30**, No. 25

*High Fat Diet in Treatment of Diabetes. F. Maignon.—p. 265.
Traumatic Ophthalmoplegias. F. Terrien.—p. 267.
Anterior Apophysitis of Tibia. P. Feutelais.—p. 270.

Fat in the Diet of Diabetics.—Maignon has been teaching for nearly fourteen years the importance of a high fat diet in the treatment of diabetes. In 1908 he was impressed with the fact that one dog with the severest form of spontaneous diabetes, rapid emaciation, intense glycosuria and grave protein denutrition threw off all these symptoms in a few days when the animal was fed exclusively on oil. Fats seem to be foods *par excellence* for the diabetic. They are the only ones that do not generate sugar, while their potential energy can be totally utilized. His years of experience have confirmed this beyond question, as he relates in detail. He says that the benefit from fasting in diabetes is due mainly to the fact that this is equivalent to a fat diet, as the body consumes its reserves of fat. The only contraindication is when the pancreas is so seriously diseased that it is unable to take care of the fat ingested. He hails the recent publication of Newburgh and Marsh (mentioned editorially in THE JOURNAL, April 15, 1922, p. 1126), as confirming his own experience and deductions. The fat is given in the most digestible form, in an emulsion, adding an alkali to keep the urine reaction normal, while keeping protein down to the indispensable minimum, with more or less complete abstention from carbohydrates. The emulsion he prefers is made by agitating at intervals during forty-eight hours a mixture of 600 gm. of sesame oil and 300 gm. of distilled water with 5 c.c. of sodium hydroxid. This is then set aside for forty-eight hours and the supernatant emulsion is decanted, leaving the water in excess. Then he adds 20 gm. of neutral glycerin, flavored with 2 cg. of vanillin and half a drop of essence of bitter almond. In his extensive experience, the majority of diabetics assimilated fat perfectly, and the acetone diminished. This observation has convinced him that lesions in the pancreas in diabetes are not so common as generally assumed. Clinical facts refute Allen's and others' statements to the contrary. Petrén has recently reported excellent results from occasional pure fat diet days in treating diabetes. The aim of treatment with menacing coma, he reiterates, is not the acidosis but the nitrogen denutrition, and for this there is nothing more effectual than a high fat diet, with enough sodium bicarbonate to combat the hyperacidity of the urine. He adds that he has never had coma develop in the numerous cases of diabetes, even of the gravest type, with intense denutrition and high glycosuria and acetonuria, when the patients were kept on this high fat diet.

Revue de Chirurgie, Paris

1921, **59**, No. 12

*Fusion of Radius and Ulna. R. Beuchard.—p. 629.
*Acute Gallstone Cholecystitis. F. Papin.—p. 648.
*Peptic Ulcer. Gelas.—p. 668.

Primary Radius-Ulna Synostosis.—Beuchard gives the clinical and roentgenographic history of two cases in which the upper ends of the bones of the forearm were fused to form a single broad shaft. In his first case, both arms of the washerwoman of 71 showed this malformation, and her father is said to have the same. The hands are held in pronation; supination is impossible. Her son, a man of 47, has the same synostosis, and in one of his eight children, now 11, supination is impossible with the right hand. Flexion of the elbow is somewhat hampered in all these cases, but the strength of the arm is not impaired. In twenty of the

seventy-five known cases an operation was attempted, but only one instance of complete success is known. In the others, the results were insignificant in proportion to the tedious operations required.

Acute Gallstone Cholecystitis.—Papin advocates removing the gallbladder at once, on the same principle as in acute appendicitis. The contraindications are practically the same as with the latter. Especially in the obese, or when old adhesions interfere, it may be wiser to merely incise the gallbladder, as also when the cholecystitis is accompanied with jaundice and enlargement of the liver or pancreas or both. He discusses the technic and compares the experiences of a number of surgeons in Europe and America.

Peptic Ulcer After Gastro-Enterostomy.—Gelas remarks that gastrojejunal peptic ulcer is generally consecutive to an ulcer in the pylorus region. Recent writers have emphasized the exceptional frequency of peptic ulcer after operations excluding the pylorus. Even pylorectomy does not exclude this complication. The hyperacidity may be a manifestation of the new wave of ulceration, and may not be its cause as often assumed. The cause inducing the tendency to ulceration is still a mystery. Equally mysterious is the localization of the ulcers at a few given points, especially at the outlet of the stomach, the pylorus and the new gastrojejunal opening. The modern tendency in treatment of a peptic ulcer is complete excision.

Revue Franç. de Gynécologie et d'Obstét., Paris

February, 1922, **17**, No. 2

*Carcinomas of the Ovary. L. Aubert.—p. 81.
*Conservative Treatment of Uterine Fibromas. F. Wetterwald.—p. 93.

Carcinoma of the Ovary.—In a case reported, Aubert found that the malignant disease had spread beyond what could be resected, so after the ovariectomy he gave a course of deep roentgen-ray treatment, and the woman of 55 seems now permanently cured. The tumor had been regarded as a harmless fibroma and had been given a previous course of roentgen exposures. This, he explains, is the great danger of these physical measures in treatment of pelvic tumors, wasting precious time before the malignant nature is recognized.

Fibromas.—Wetterwald declares that women with fibromas are of the congestion and cellulitis type, prone to vasodilation and dystrophia of the connective tissue. This tendency explains the hemorrhages and pains, and it is possible to combat and overcome this predisposition to hemorrhage and pains by massage and gymnastic exercises to reduce congestion. Light massage of the abdomen and abduction of the femur are usually all that is needed. Active abduction of the thigh will arrest or moderate uterine hemorrhage in 80 or 90 per cent. of the cases. These stimulate the cardiovascular reflex and banish the edema around the uterus and adnexa, and the general health improves. The treatment is harmless, and in two-thirds of the cases will tide the patient along until the menopause automatically puts an end to these disturbances. The fibroma does no harm, as a rule, if complications can be warded off.

Schweizerische medizinische Wochenschrift, Basel

March 16, 1922, **52**, No. 11

*Ear, Nose and Throat in General Practice. A. Schönemann.—p. 269.
Sepsis Post Abortum After Wearing Intra-Uterine Pessary. M. Wetterwald.—p. 276.
Iodin in Prophylaxis and Treatment of Goiter. E. Baumann.—p. 280.
*Congenital Dropsy. O. Koegel.—p. 282.
*Medical Impressions of America. K. Schlaepfer.—p. 284. Conc'n.

Ear, Nose and Throat Disease in General Practice.—Schönemann's profusely illustrated article discusses chronic otitis media, and describes favorable experiences with insufflation of an antiseptic powder directly into the middle ear through the eustachian tube. He has been applying this method in treatment of otitis media for nine years, and no one has ever complained of serious by-effects.

Congenital Dropsy.—Two stillborn infants presented ascites and edema with proliferation of myeloid tissue in spleen and liver. The mother of one had pregnancy nephritis; the other mother was syphilitic.

Medical Impressions of America.—Schlaepfer concludes this long review of different aspects of surgery in this country as he studied them in the various medical centers: "Everywhere, wherever we look, we see in America medicine and the medical sciences developing lustily. . . . New problems are constantly being solved in the most diverse specialist domains. Everywhere progress is being realized—Vorwärts gehts allerorten!" Previous instalments of Schlaepfer's "Impressions" were mentioned on page 1340. See also p. 1500.

Pediatria, Naples

April 1, 1922, **29**: No. 7

*Vaccine Therapy in Typhoid in Children. L. M. Spolverini.—p. 289.
*Pathology of Nervous System in Children. G. Berghinz.—p. 301.
*Primary Diphtheria of the Anus. M. Mallardi.—p. 318.
Protein Therapy for Intolerance of Milk. S. de Stefano.—p. 321.

Vaccine Therapy of Typhoid in Children.—Spolverini gave vaccine treatment to 113 children in the five years ending with 1919; protein therapy in 21 cases, and merely the ordinary treatment in 61, mostly the mildest cases. Complications developed in about 20 per cent. in each group, but in the vaccine treated cases they were predominantly complications not directly connected with the disease, while in the other two groups they were mostly manifestations of the typhoid. The gravest cases were given the vaccine therapy as a rule, but the death rate in each group was about the same, namely, 8 in 113; 4 in 61, and 2 in 21. The vaccine was most effectual, the earlier in the disease it was given. In 35 of the 113 there was prompt resolution of the process by a crisis, the third to the fifth day; the improvement was more gradual in 53, and in 25 no clinically appreciable effect could be detected.

Pathology of the Nervous System in Children.—Berghinz illustrates a case of symmetrical gangrene of the feet in a 12 months' infant with inherited syphilis. Necropsy revealed defective development of the spinal cord. He describes further two cases of congenital myatonia in a boy of 2 and girl of 7. Berghinz has encountered only 2 cases of mirror writing in twenty-five years of practice. One is in a girl with right hemiplegia from poliomyelitis; she writes with her left hand, writing mirror or normally at will. The other case is in a young woman with verbal and psychic deafness.

Primary Diphtheria of the Anus.—The infant of 22 months recovered under antitoxin treatment when the severe diphtheric process at the anus was discovered and differentiated. Both diphtheria bacilli and streptococci were cultivated from the lesion.

Policlinico, Rome

March 13, 1922, **29**, No. 11

Status of Fight Against Malaria. M. Sella.—p. 345. Conc'n No. 12, p. 383.
Scarlet Fever in Rome. P. Sorgente.—p. 353.
*Sinus Complications of Ear Disease. G. Fantozzi.—p. 354.

Sinus Complications of Otitis.—The rebellious bilateral otitis in the youth of 15 was of nearly three years' standing, when headache became almost continuous, with other symptoms suggesting septic thrombophlebitis of the lateral sinus. This was incised and the clots removed, and a fenestrated fine rubber tube was introduced into each end of the sinus, and a right-angle glass tube fitted on each end of the drain tube. Irrigation with physiologic saline was kept up for two or three days, and recovery was complete in about a month. The operation on the sinus had followed ten days after a radical operation on the middle ear through an incision back of the ear. A course of arsphenamin by the vein seemed to have aided in the cure. After each injection the headache and the fever subsided for a day. No attempt was made to ligate the jugular vein. When the patient left the hospital, conditions in the other ear seemed to have returned to normal.

March 20, 1922, **29**, No. 12

Three Cases of Miliary Fever. M. Scelba.—p. 377.
*Assimilating Value of Antidiabetic Diets. G. Aiello.—p. 380.

Dietetic Treatment of Diabetes.—Aiello comments on the advantages of estimating the assimilation value in diabetes from time to time, that is, subtracting the total sugar excreted from the total intake.

Feb. 15, 1922, **29**, Surgical Section No. 2

*Lymphatic Cyst in Accessory Suprarenal. C. Ansaldi.—p. 65.
*Suture of Carotid Artery. G. Beccherle.—p. 81.
*Wassermann Reaction After Anesthesia. L. Domenici.—p. 92.
Surgical Spleen. G. Fichera.—p. 99. Cont'd.
*Photodynamic Substances for Wounds. L. Torraca.—p. 115.

Lymphatic Cyst Developing from Accessory Suprarenal.—In connection with an operative case, in a man of 44, Ansaldi discusses retroperitoneal cysts in general, with the bibliography of recent years.

Suture of Carotid Artery.—The hemorrhage occurred the second day after the minute shell wound of the artery, and the suture was successful and without by-effects.

The Wassermann Reaction After General Anesthesia.—Dominici tabulates the findings in 37 cases after chloroform, 12 after ether and 11 after spinal anesthesia. The operations had been done for a wide variety of lesions in supposedly nonsyphilitics, and the response was invariably negative except in 4 who had given a positive response before the operation.

Action of Quinin and Methylene Blue on Healing of Wounds.—Torraca found these two drugs the most active of the fluorescent chemicals that have a photodynamic action. By this term is meant the activation of their properties by light: They have no toxic action in the dark, but become toxic for infusoria, etc., after exposure to light. His tests were made on guinea-pigs given a daily injection of 1 c.c. of a 1:1,000 solution of quinin or of a 1:100,000 solution of methylene blue, after a superficial lesion had been induced. The difference in the percentage of area healed over by the eighth and the twelfth days was striking in the animals kept in diffuse daylight or in the dark thereafter. Quinin seemed more potent, and especially at this concentration; stronger solutions were less effectual, as also of the other photodynamic substances tested.

Riforma Medica, Naples

Feb. 13, 1922, **38**, No. 7

*Isolation of Antigen plus Antibody. G. Izar and G. Caruso.—p. 145.
*Calcium Chlorid and Dechloridation. V. Susanna.—p. 146.
Subhepatic Appendicitis. O. Cignozzi.—p. 147.
Treatment of Superficial Cancer. F. Pulvirenti.—p. 150.
Viscum Album in Therapeutics. P. Piccinini.—p. 155.

Isolation of Antibodies from Immune Serums.—Izar has demonstrated that by adding doubly distilled water to an immune serum, the antibodies separate out. He now reports similar research on mixtures of antigens and antibodies. The precipitate obtained by centrifugation and addition of distilled water retains the power of fixation of complement.

Calcium Chlorid as a Diuretic.—Susanna was disappointed in the action of calcium chlorid as a diuretic; the secretion of urine was not modified by it in the majority of his tests. There was nothing to indicate the "dechloridation" which others have reported under it.

Revista Española de Medicina y Cirugía, Barcelona

January, 1922, **5**, No. 43

*Indications for Operating with Gastric Ulcer. E. Ribas Ribas.—p. 1.
Wolff-Eisner and His Work. J. B. Darder Rodés.—p. 11.
Cytology of Pleural Effusions. Remigio Dargallo.—p. 19.
Intestinal Infections. A. Salvat Navarro.—p. 21.
Precipitation with Acetone of Immune Serums. P. González and M. Armangué.—p. 28.

Gastric Ulcer.—Ribas' illustrations and record show the increasing trend to more radical operations in cases of gastric ulcer in recent years, and he draws the balance sheet for and against operative treatment. It seems to be established now, he says, that while gastro-enterostomy is effectual treatment in ulcers and stenosis of the pylorus and prepyloric region, yet it does not answer alone for ulcers of the lesser curvature. These require radical resection, he continues, saying that this is not the serious operation that many still believe.

Semana Médica, Buenos Aires

Feb. 16, 1922, **29**, No. 7

*Cholesterin in Relation to Gallstones. J. Servetti Larraya.—p. 241.
Tuberculin in Treatment of Asthma. J. J. Viton.—p. 257.
Death Rate in 1921 from Influenza at Rosario. J. B. Valdés.—p. 259.
Necessity for Hospitalization of Typhoid Cases. M. G. Lebredo (Havana).—p. 271.

Feb. 23, 1922, **29**, No. 8

Social Importance of Psycho-Physiologic Exploration of Organs of Sense. J. Ramón Beltrán.—p. 277.
Diverticulum in Duodenum; Three Cases. J. Gutiérrez.—p. 309.
Bismuth to Promote Tolerance of Mercury. A. Stagnetto López.—p. 315.
Social Service. V. Delfino.—p. 315.

Cholesterin in Relation to Gallstones.—The ratio between the cholesterin in the blood and in the stools was ascertained in a number of cases of gallstones. The findings are tabulated, with other details, and the physiologic and pathogenic rôle of cholesterin is discussed.

Siglo Médico, Madrid

March 4, 1922, **69**, No. 3560

*Congenital Goiter. J. Bravo y Frias.—p. 225.
Treatment of Gonorrhea in Women. Sicilia.—p. 229.

Congenital Goiter.—There had been ten children born to the family, and five of them had congenital goiter although nothing of the kind was known in the family otherwise, and goiter is not endemic in that region. Bravo gave the 2 months babe treatment for syphilis, as both parents responded positively to the Wassermann test, although the father's syphilis was of thirty-two years' standing. No benefit was apparent from the specific treatment, and the child was losing weight. A change was then made to antithyroid treatment, and then improvement was rapid and amounted to an actual cure. This treatment was kept up for twenty days each month for six months. The only other surviving child with congenital goiter is a girl, now 11. He does not know of any similar instance of familial sporadic congenital goiter on record, and the series of five cases in this family seem to exclude a syphilitic origin. If syphilis had been responsible, the syphilitic nature would have become evident by this time in the girl of 11.

Archiv für Verdauungs-Krankheiten, etc., Berlin

February, 1922, **29**, No. 3-4

*Protein Therapy of Gastric Ulcer. G. Holler.—p. 123.
*Effect of Pituitary Extract. H. Gorke and E. Deloch.—p. 149.
*Quantitative Test for Pepsin. L. Jarno.—p. 164.
Alimentary Toxicosis in Adults. C. Funck.—p. 167.
*Formaldehyd Titration of Albumin in the Stomach. O. Speidel.—p. 171.
*Sugar Metabolism. R. Offenbacher and A. Hahn.—p. 193.
*Influence of Heat on Stomach. L. v. Friedrich.—p. 220.
*Palpation of Abdominal Aorta. F. Schilling.—p. 235.

Cure of Gastric and Duodenal Ulcer by Protein Therapy.—Holler announces that he was the first to apply protein therapy in treatment of gastric and duodenal ulcer, and that his success with it has thrown new light on the etiology and cure of these lesions. This article, he states, is the first of a series reporting the results of his observations on an extensive material in the last nine months. He is assistant at the Second Medical Clinic at Vienna, in charge of Ortner. Protein bodies parenterally injected act by their albumin content, by the colloidal complex, or by some specific element, or by raising the temperature. The aim should be to select some protein body for injection that will combine all of these potent factors. The best protein body for the purpose is still undecided. He used milk or dysentery toxin, or a proprietary autolysate of *Bacillus prodigiosus* and staphylococci which, he says, seems to have a special affinity for nerve tissue. The protein body was injected into a muscle or vein; the general reaction to intravenous administration was stormy but never dangerous. During the war, one man with tormenting gastric ulcer seemed to be cured at once of the ulcer by an intercurrent malaria. From five to nineteen injections were made in the five typical ulcer cases of which the details are given. Each forms a biologic experiment which confirms, he asserts, the relations between the vagus and the ulcer, the parenterally injected protein body inducing a focal reaction in the focus of inflammation and in the nerves suffering from the latter. The injection is followed by an abrupt drop in the total acidity while the pepsin and secretion and the temperature run up. In one of the typical cases charted there was no further spontaneous pain after the first injection, but the tenderness of the left upper epigastrium persisted till after the fifth injection; the man of 37 has had no further disturbances since, without restrictions in diet. Holler regards the anacid hypersecretion that follows the parenteral injection as

decisive testimony of the focal reaction in the innervation of the stomach. This innervation soon became so stabilized by the injections that in two weeks it became impossible to elicit an abnormal secretory reaction by either mechanical or digestive means.

Action of Pituitary Extract on the Digestive Tract and Blood.—The extract of the posterior lobe seemed to increase the tonus of the stomach and bowel, and the ferment, bilirubin and cholesterin content of the blood, while reducing secretion in the salivary glands and pancreas, and the production of bile, in the majority.

Simple Test for Pepsin.—Jarno commends the modification of Gross' sodium acetate test as reliable and extremely simple. He uses two solutions of casein, a 1:1,000 and a 5:1,000, dissolving 1 gm. of the casein with 50 c.c. of decinormal sodium hydroxid, without heating. He then neutralizes with about 35 or 40 c.c. of hydrochloric acid. When neutralized, he adds 500 c.c. of decinormal hydrochloric acid. This causes a heavy precipitate which dissolves again on shaking the vessel. The solution is then diluted with distilled water to make 1 l. A scrap of thymol is added to prevent mold. A 5:1,000 solution is made also in the same way, without heating. Four test tubes are used for the test, I and II for equal parts of the gastric juice and the strong or the weak casein solution; III and IV for equal parts of ordinary water and the two solutions. After standing for fifteen minutes at room temperature he adds to each tube one large or two small drops of a 20 per cent. solution of sodium acetate. If all four tubes are turbid, there is no pepsin present; if both I and II are limpid, there is a four plus proportion of pepsin present. In the normal, the proportion is three plus. Tubes III and IV are the controls.

Fate of Protein in Stomach.—Speidel has had the opportunity to study the digestion of albumin in the stomach in a woman with a gastric fistula. After taking the test meal by the mouth, 100 c.c. of stomach content was obtained through the fistula the fifteenth, thirtieth and fortieth minutes. In a number of other patients the stomach contents were obtained by the usual technic, and the formaldehyd titration findings in all are tabulated. Among the practical results of the research are the confirmation of the improvement in gastric secretion and proteolysis after administration of hydrochloric acid with pepsin, in cases of achylia and anacid gastritis.

Alimentary Glycemia as Test of Sugar Metabolism.—After drinking 50 gm. of glucose dissolved in 300 c.c. of tea, the sugar content of urine and blood was determined every hour. The findings are tabulated from 8 persons with normal metabolism, 5 neurasthenics, 10 with endocrine disturbances, and 30 with nephritis. Among the practical conclusions is that the sugar content of the blood, fasting, is not of material import for the prognosis. On the other hand, 4 died of the 10 with exceptionally prolonged hyperglycemia (from two to four hours) after the alimentary test, and one now is in very bad condition. Only 2 in this group are doing well. The writers urge others to study in connection with the ultimate outcome this protracted hyperglycemia after ingestion of 50 gm. of glucose. With neurasthenia and in some cases of exophthalmic goiter, there is usually a pronounced hyperglycemia reaction and possibly glycosuria, but they rapidly subside to the preceding normal sugar content of the blood. When there is hyperglycemia, fasting, in exophthalmic goiter, then the response to the alimentary test is like that with the deranged metabolism in diabetes. He thinks that by this test we can classify different forms of exophthalmic goiter better than has been possible hitherto.

Influence of Heat on the Stomach.—Friedrich had the patient swallow a narrow duodenal tube to the 50 cm. mark, and then drink 300 c.c. of a 5 per cent. solution of alcohol. Every ten minutes 15 c.c. of stomach contents was aspirated, the patient seated throughout the tests, and refraining from swallowing to avoid admixture of saliva. The whole procedure was repeated with heat applied to the stomach, cataplasms or a hot water bottle or electric pad. In sixteen persons thus tested the response was always practically the same, regardless of whether the stomach was sound or diseased, namely, the secretion in the stomach did not seem to be modified by the heat, applied beforehand or at the time of the tests. In seven of the subjects the secretion reached its height earlier without the heat than with it. The motor functioning, however, seemed to be stimulated by the heat. This was marked in one subject into whose stomach hot air had been insufflated through the tube. The beneficial action of local application of heat is due to the acceleration of the motor functioning, and the relaxation of muscular spasms under its influence. It also may relieve by modifying reflex action.

Palpation of Abdominal Aorta.—Schilling has found it possible to palpate the viscera, and here describes how he investigates the aorta by this means. The thinner and leaner the abdominal wall the more instructive the palpation findings. He describes the technic and interpretation of the findings.

Deutsche medizinische Wochenschrift, Berlin

Feb. 16, 1922, **48**, No. 7

Degeneration and Regeneration. P. Ernst.—p. 215.
Organotherapy in Diabetes Mellitus. Loening and Vahlen.—p. 217.
Flocculation and Turbidity Reactions in Syphilis. E. Meinicke.—p. 219.
Frequency of the Wassermann and the Flocculation Reactions in Tuberculosis in Children. E. Rüscher.—p. 221.
Arsphenamin Plus Calcium Therapy in Syphilis. Pulay.—p. 223.
Treatment of Tuberculosis with Colloidal Gold. E. Levy.—p. 223.
*Nonprotein Nitrogen in the Blood in Infections. E. Cohn.—p. 226.
Use of Acridin in Vaccination Lymph. E. Illert.—p. 227.
Traumatic Laceration of Cardiac Valves. G. Brandis.—p. 229.
Errors in Chemical Analysis of Blood and Urine. Müller.—p. 229.
Endocrine Glands in Relation to Anomalies of the Teeth and Jaws. W. Petzel.—p. 231.
Significance of the Mongolian Spot. Leven.—p. 231.
Pathogenesis and Therapy of Rachitis. R. Fischl.—p. 232. Conc'n No. 8, p. 261.
Polypous Tumors of Female Genitalia. Liepmann.—p. 234.

Nonprotein Nitrogen in the Blood in Croupous Pneumonia, Scarlet Fever, Measles and Diphtheria.—Cohn examined 55 patients with pneumonia, making 63 determinations. The highest values in the various patients were: under 35 mg., 7 patients; 36-45 mg. (slightly above normal), 14; over 45 mg. (a marked increase), 34. In 50 scarlet fever patients: under 35 mg., 30; 36-45 mg., 14; over 45 mg., 6. In 36 cases of measles the findings were: under 35 mg., in 16; 36-45 mg., 14; over 45 mg., 6. The 40 diphtheria patients showed these values: under 35 mg., 23; 36-45 mg., 9; over 45 mg., 8. In pneumonia, the residual nitrogen values did not depend on the proportion of lung involvement, for over half of the patients in whom several lobes were involved presented normal values. In one case in which at first only one lobe was involved, the residual nitrogen finding was 72 mg., where several days later, when three lobes were involved, only 63 mg. was found. Nor did the temperature show a parallelism, since there were normal values with high temperature and high values with moderate temperature. Especial attention was paid to the kidneys, and it was found that febrile albuminuria was associated just as frequently with high as with low nitrogen values; likewise cylindruria and hematuria. The blood nitrogen does not seem to be dependent on the duration of the disease process. As to whether or not high nitrogen values suggest an unfavorable prognosis in all infectious diseases, as some have asserted, Cohn was able to note that in influenza only a sudden marked increase of nitrogen could be regarded of unfavorable omen; a single high finding could not be so interpreted. It was noted by Cohn, as previously by other investigators, that nitrogen values frequently drop after the crisis is passed.

Deutsche Zeitschrift für Chirurgie, Leipzig

February, 1922, **168**, No. 3-6

*Cancer of the Rectum. F. Mandl.—p. 145.
*Surgery of the Brain in North America. K. Schlaepfer.—p. 289.
*Arteriomesenteric Occlusion of Duodenum. W. Reinhard.—p. 319.
Surgical Anatomy of Portal Vein System. F. J. Walcker.—p. 354.
*Malignant Degeneration of Gastric Ulcer. F. Peyser.—p. 409.

Cancer of the Rectum.—The 144 pages of Mandl's study of this subject are based on 779 cases in Hochenegg's service, including 469 in which the rectal cancer was removed by resection of the sacrum. In addition to these nearly 800 cases, nearly as many more were seen in private practice or in consultation, so that the etiology, symptoms and treatment

are discussed on a basis of 1,500 cases. Of the 333 radical sacral operations, 112 of the patients were living after three years: 33.6 per cent. after three years; 25.8 after five, and 10 after ten years. In the 779 clinic cases, 67.6 per cent. were men, and 3 of the women were under 20, and 3 men and 2 women between 20 and 25; 13 men and 9 women were between 25 and 30; 29 men and 36 women between 30 and 40, and 27 men and 11 women were between 70 and 80. There were hemorrhoidal nodules only in 7.2 per cent., and there was a history of chronic constipation only in 3.2 per cent., but polyposis was evident in 12 per cent. In 13 cases the cancer seemed to have some connection with a pregnancy; in 4 the first symptoms were noted early in a pregnancy and in 2 they had just preceded it. In 7 cases there was another cancer elsewhere, and an inherited predisposition was evident in 10.7 per cent. The superficial diagnosis of "intestinal catarrh" or "hemorrhoids" had been made in 66 cases, and thus the patient was doomed by the physician's heedlessness; this was particularly likely to occur in the younger subjects. In 223 cases the first symptom to attract attention was a sudden rebellious diarrhea, or sudden constipation; in 175 cases blood and mucus in the stools and in 171 cases pain at defecation were the first symptoms; in 16, pain in the abdomen and oppression; in 18, sacral pain; cramps in 10; loss of weight in 11; disturbance in micturition in 9, and a sensation of a tumor in the rectum in 9. In 48 cases there was no loss of weight. The interval between the first symptoms and the operation was at least thirteen months in 138 cases; in 83 it was over a year and a half; in 22 less than a month. The outcome with the different technics is described and compared with others' experience. Mandl warns against roentgen exposures preliminary to operative measures, and states that the effect of either roentgen or radium treatment seemed to be deplorable. [A less complete report by Mandl was summarized recently, p. 1175.]

Surgery of the Brain in the United States.—Schlaepfer relates his experience in this country in studying surgery of the brain last year with Cushing, Frazier, Dandy and others, and reviews 103 of their more important publications and their technic. He ascribes the great progress realized here in the last two decades "mainly to the fact that both diagnosis and treatment were in the hands of the same neurosurgeon. This and the incomparable mastery of general anesthesia have advanced the treatment of brain affections to such a point that, in their hands, operative intervention on the brain or spinal cord does not represent any more of an operation than an exploratory laparotomy with us." Schlaepfer is chief of the surgical clinic of the University of Zurich.

Arteriomesenteric Occlusion of the Duodenum.—Reinhard insists on the necessity of distinguishing between a neurotic and an organic form of the occlusion. Acute dilatation of the stomach is always combined with atony or paralysis of the upper bowel, so that the occlusion can easily occur. With the organic form, there is dilatation of the stomach at first, and stomach cramps show the efforts the upper digestive tract is making to force the contents past the obstruction. Change of position, combined with continuous drainage of the stomach, preferably through the nose, with efforts to stimulate bowel functioning, and profuse saline infusion, subcutaneously and by the vein and rectum are indicated. As a last resort, a laparotomy is justified, simply drawing the bowel out to release it from the traction and replacing it at once, then applying position treatment and aspiration drainage. With an atonic dilated stomach, a gastro-enterostomy is futile but it is indicated if the stomach is vigorous. The prognosis grows rapidly graver the longer the occlusion lasts, and the patient grows weaker and succumbs to heart failure. In his ten cases described, only two were saved, and he remarks that if relief cannot be obtained by conservative measures there is not much hope from operative.

Gastric Ulcer-Cancers.—Peyser found 28 pure gastric ulcers; 24 cancers and 1 sarcoma in 53 cadavers examined since the war. The cancers had all been correctly diagnosed, and 4 of the pure ulcers had been assumed to be malignant.

Jahrbuch für Kinderheilkunde, Berlin

February, 1922, **97**, No. 3-4

*Active Immunization Against Diphtheria. H. Opitz.—p. 123.
*Treatment of Spasmophilia. K. Scheer.—p. 130.
*Predigestion of Cow's Milk Albumin. S. Rosenbaum.—p. 147.
*Food Elements Influencing Utilization of Fat. G. Frontali.—p. 162.
*Duodenal Ulcers in Children. A. v. Bosányi.—p. 182.
Multiple Chondroma in Boy of Thirteen. A. v. Koós.—p. 190.
Symptoms of Spondylitis from Swallowed Pebble. M. Paunz.—p. 197.
Lymphosarcoma in Liver of Three Weeks' Infant. B. Johan.—p. 200.
*Functional Diagnosis of Kidney Disease. M. Abelmann.—p. 209.

Active Immunization Against Diphtheria.—Opitz reports that intradermal injection of a fivefold overneutralized mixture of diphtheria toxin and antitoxin is an effectual means for active immunization. The toxin is liberated from the mixture after it is injected, and this stimulates antibody production. The duration of the immunization is still a question, and he urges others to cooperate in this line.

Treatment of Spasmophilia.—The benefit from calcium chlorid in treatment of spasmophilia is established now beyond question. Scheer has been experimenting with the separate elements of calcium chlorid, and here reports surprisingly favorable results with the chlorin element alone. He gave it in the form of hydrochloric acid in milk, in 8 cases of very severe tetany, and with invariable success. He stirs 260 parts of decinormal hydrochloric acid into 740 parts unboiled whole milk; adds 4 per cent. of sugar, and boils up slowly. The acidity corresponds to that in the infant stomach at the height of digestion, and the children like the mixture.

Acute Nutritional Disturbances.—The action of peptic and tryptic predigestion of the albumin of cow's milk is discussed in this, Rosenbaum's fifth communication.

Utilization of Fat in Infant Feeding.—Frontali's research was devoted to study of the various correlations of the elements of the food on the utilization of fat.

Duodenal Ulcer in Children.—Bosányi reports the cases of 2 young infants with an extensive skin disease who both developed a duodenal ulcer at almost the identical point. The connection with the dermatitis seems unmistakable. The resemblance to Curling's ulcers after severe burns is striking, from several standpoints, and especially the location of the ulcers. In Theilis' compilation of 31 cases of duodenal ulcers after severe burns, the ulcer was in the horizontal portion in 22, and in 12 of these at the point where the head of the pancreas lies against the duodenum. This was the seat of the ulcer also in Bosányi's two cases, and he thinks that the pancreatic juice must be incriminated to a certain extent.

Tests of Kidney Functional Capacity.—Abelman tabulates the findings in eighteen cases of chronic kidney disease and twenty of acute nephritis in which the various functional tests were applied parallel and compared with the ultimate outcome. Especially after recovery from acute nephritis, the response to the tests may warn that the kidneys still need to be spared to ward off chronic nephritis later.

Medizinische Klinik, Berlin

Feb. 26, 1922, **18**, No. 9

Experiences in Treatment of Typhoid. Bardachzi.—p. 263.
*Arsphenamin Questions. Arndt.—p. 266. Begun in No. 8, p. 231.
*Tuberculosis and Pregnancy. E. Zweifel.—p. 269.
*Protein Therapy. F. Glaser and Buschmann.—p. 271.
*Symptoms of Tumor in Frontal Lobe. Dimitz and Schilder.—p. 273.
*Gastric Secretion in Anemias. N. Roth and F. Sternberg.—p. 274.
Medical Certificates for Candidates for Matrimony. Schubart.—p. 277.
Reply. L. Kleeberg.—p. 277.
Proof of Muscular Impulse Transmission in Frog Heart. Haberlandt. —p. 278.
*The Predisposition and the Constitution. F. Fleischer.—p. 279.
*Practical Obstetric Questions. E. Runge.—p. 281. Cont'd.
Roentgenology of Chronic Appendicitis. Waitzfelder.—p. 283.

Arsphenamin Questions.—Arndt relates that during the last two years there were 280 cases of jaundice in syphilitics under treatment with arsphenamin at the Charité Hospital, and in 231 the drug was evidently responsible. This includes five children with inherited syphilis. The jaundice developed during or immediately after the treatment or up to two and a half months later. There were seven deaths during this period for which the drug was incriminated. Since these fatalities the arsphenamin has been given more cau-

tiously, and there have been no cases of jaundice since in the third stage of syphilis. He adds that a rise in temperature during arsphenamin treatment may warn of impending disturbance. One robust man developed a diffuse dermatitis during the treatment, and the case was studied retrospectively for preceding signs of intolerance. Nothing was found but a moderate peak in the temperature chart. This was not recognized as a warning, and the usual dose of arsphenamin was given, the dermatitis appearing at once and persisting rebellious to treatment for two or three months. In conclusion, Arndt urges avoidance of middlemen in procuring the drug.

Pregnancy and Tuberculosis.—Zweifel interrupted the pregnancy on account of tuberculosis in 32 cases between 1907 and 1915, and 18 of these tuberculous women are in much improved health today; 7 have shown no material change since, and 5 have died. "A protracted course of sanatorium treatment is indispensable after the induced abortion, as well as after normal childbirth." When the woman is once thoroughly cured, a pregnancy then may have a favorable outcome, as gestation does not cause the flaring up of an old healed tuberculosis.

Protein Therapy.—Glaser and Buschmann's conclusion from their extensive experience with parenteral protein injections is that the most important field for this form of therapy in internal medicine is in subacute disease in joints. They regard the stimulation from the protein therapy as an intensification of certain physiologic processes. The nonspecific increase in resistance that follows subsides in a day or two and hence, to maintain the effect, the injection should be repeated every day or two. If, on the other hand, a specific action is desired, then time must be given for the ebb and flow of the specific action, and this would require an interval of five or six days. Some have reported recently that the joint foci show the effect of certain protein bodies even taken by the mouth. Antipyretics by the mouth have been known to induce distinct focal reactions in pulmonary tuberculosis.

Symptoms of Tumor in Frontal Lobe.—A case of frontal glioma is described in which the site of the tumor was correctly diagnosed.

Gastric Secretion in Differentiation of Anemias.—In 14 cases of pernicious anemia, no hydrochloric acid could be found in the stomach content on repeated examination. In aplastic anemia, on the other hand, gastric secretion was within normal range in the cases examined. In a case of the latter, in a man of 45, the erythrocytes dropped to 630,000 and the leukocytes to 1,800, but the figure for the free acid was 20, the total acidity 30. This hemorrhagic aleukia or panmyelophthisis, as he calls it, thus differs essentially from pernicious anemia with its inevitable achylia.

The Predisposition as an Element in the Constitution.—Fleischer remarks that none of the recent writers on the importance of the constitution have attempted to define what is meant by "constitution," but regard it as of a functional nature.

Practical Questions in Obstetrics.—Runge here starts a new series on emergency obstetrics, and emphasizes among other points that the length of the fetus and child is the best criterion for its age. A simple rule to remember is that for the first five months the length of the fetus in centimeters should equal the figure representing the month multiplied by itself; after the first five months, multiplied by five for the last five months. At term the fetus should measure 48 or 50 cm. He says that a child that is less than 48 cm. in length was not carried to term.

Monatsschrift für Geb. und Gynäkologie, Berlin

January, 1922, **54**, No. 5-6

Histology of the Fetal Membranes. F. Heinlein.—p. 237.
*Chorionic Invasion. W. Schiller.—p. 244.
*Malignant Vesicular Mole. I. Amreich.—p. 249.
*Eclampsia Cured by Decapsulation of Kidney. E. Fey.—p. 256.
*Sudden Death with Atrophied Suprarenals. Zimmermann.—p. 259.
Suspension of the Portio in Operations for Prolapse of Uterus. H. Saenger.—p. 270.
The Lipoids in Eighty-Five Human Ovaries. E. Weishaupt.—p. 276.
Relations of Pregnancy to Induced Glycosuria. H. Lembcke and P. Lindig.—p. 283.
Swelling of Mammary Glands in the New-Born. G. B. Gruber.—p. 289.
Determination of Sex and Ratio of Sexes. G. Doderlein.—p. 292.
Status of Gynecologic Radiotherapy in 1920. H. Langer.—p. 297. Conc'n.
Monthly Genital Cycle and Its Anomalies. R. Schroeder.—p. 308. Conc'n.

Chorionic Invasion.—Schiller was able to trace the invasion of the chorion in the uterus in six normal and six pathologic cases.

Malignant Mole.—In the case reported by Amreich, the hydatidiform mole broke through into the uterus musculature and proliferated into veins of the organ, with metastasis in the right parametrium, the metastasis working its way through both layers of the broad ligament. This behavior indicated extreme malignancy, but after panhysterectomy and roentgen-ray exposures complete health was regained.

Eclampsia Subsides Under Decapsulation of Kidney.—The eclampsia had developed less than two hours after the normal childbirth, and convulsions followed every hour, growing more and more severe. Bilateral decapsulation of the kidney arrested them completely. Both kidneys were large and gorged with blood.

Sudden Death with Suprarenal Atrophy.—Only the medulla showed signs of atrophy in the woman of 39 who had failed to recuperate after cesarean section. A week later there was another fatality under much the same circumstances. The pregnancy had been normal, but cesarean section had been required on account of the disproportion between the fetal head and the birth passages. The pulse was regular and normally full, and the operation proceeded smoothly. There was nothing to explain the sudden functional collapse of the heart. Indirect massage of the heart by shaking the chest wall seemed most effectual in counteracting the respiratory weakness. In both patients necropsy revealed the suprarenal medulla reduced to merely a few scattered scraps.

Monatsschrift für Kinderheilkunde, Leipzig

November, 1921, **22**, No. 2

*Transactions of Thirty-Second Annual Meeting of German Pediatric Society, May, 1921, pp. 129-448.

Systematic Prophylaxis of Measles (p. 186).—Degkwitz approves the plan proposed by Pfaundler that schoolchildren who have no younger brothers or sisters under school age at home shall be in sections by themselves, and that pupils who do have younger brothers or sisters shall be segregated in other sections, where by the strict application of prophylactic measures, including isolation in the class room, the spread of infections may be prevented. If the age of morbidity for measles could be thus advanced so as to exclude children under school age, measles would cease to be numbered among the diseases that are capable of materially affecting the mortality rate. Degkwitz also recommends measles convalescents' serum for its prophylactic value against measles. He urges that, if for the city of Munich 300 measles convalescents could be secured who would become serum donors, the 6,000 cases of measles annually could be reduced to 3,000; that is, all the children under 4 years of age could be thus protected against the disease, which would mean a saving of about 200 human lives yearly. He has succeeded in cultivating a virus from measles patients which induces a mild set of symptoms that apparently confers immunity against measles. He does not give any details in this preliminary communication as the research is not completed, but he regards the regular symptomless response to date to massive measles infection as extremely promising.

Endogenous Intestinal Infection in Infants (p. 273).—Moro distinguishes two kinds of endogenous intestinal infection: 1. A certain type of bacteria that has existed in the intestine in smaller numbers comes rapidly to the front owing to especially favorable conditions of growth. 2. Intestinal bacteria appear in regions that are normally almost free from bacteria. In 1905 Tissier and Moro, working independently, discovered simultaneously that the small intestine of infants is normally almost free from bacteria, whereupon the study of endogenous intestinal infection in infants entered on a new phase. About a year later, Moro examined postmortem the intestine of infants that had died from acute nutritional dis-

turbances, and found that the whole intestine from the duodenum to the ileum was densely infected with bacteria, the flora of the small intestine being of a remarkably uniform type, with colon bacilli. He was led to advance the theory that almost every acute nutritional disturbance causes a marked change in the intestinal contents. They become more fluid and richer in nutrients, thus furnishing an excellent culture medium for various types of bacteria, which accordingly increase in numbers and probably also in virulence. These bacteria ascend to higher portions of the intestine, reaching the small intestine and the duodenum. This he terms endogenous infection of the small intestine. The question arose as to what had deprived the small intestine of its natural protective power. Animal experimentation showed that the fatty acids, such as butyric and acetic acids, so commonly incriminated, are not particularly to blame, but that a complete endogenous infection of the small intestine in rabbits and dogs could be brought about most surely and most rapidly by feeding large quantities of sugar, and that when heat was applied the effect was still further enhanced. So in the infant, sugar acts as an excellent culture medium, favoring the growth of invading bacteria, and heat paralyzes the normal functioning of the small intestine. Sometimes the infection is confined to the chyme, when we may speak of chyme infection; or the mucosa, examined separately, may reveal that also the wall of the intestine is affected, which adds to the seriousness of the situation and shows that the defense of the small intestine had broken down entirely, owing to the severe nutritional disturbance.

Dementia in Young Children (p. 389).—Zappert reports two cases of infantile dementia from his own practice and also gives condensed histories of five further cases communicated to him by T. Heller, who was the first to call particular attention to this form of dementia (1908). All seven cases are so similar that there can be no doubt about their belonging to the same group. After a period of normal or approximately normal development, the typical symptoms of the condition begin to appear in the third or fourth year. At the onset of the disease and during its further evolution, disturbances of speech become manifest. These are often the first disturbances to attract the attention of the parents. At first only peculiar inaccuracies of pronunciation are noted, but later speech becomes quite indistinct. In every case great unwillingness to speak developed, until finally spontaneous speech ceased entirely; also the understanding for spoken language was gradually lost. Restlessness, an excited condition and sometimes hallucinations were common manifestations. Fear states were noted in some instances. The dementia continued to increase and ended in a few months in complete idiocy. The facial expression did not become idiotic but remained, as a rule, rather intelligent. There were no bodily symptoms connected with the nervous system—no motor disturbances. The condition finally became stationary without impairment of the physical health. One of the children was the son of a physician. The diagnosis at first had been hysteria, but the course of this and the other cases confirmed the progressive dementia. All were boys but one in this series.

Zeitschrift für Tuberkulose, Leipzig

March, 1922, **35**, No. 6

*Sedimentation Speed of Erythrocytes in Tuberculosis. G. Katz.—p. 401.
Immunity to Tuberculosis: Theory and Practice. H. v. Hayek.—p. 424.
Pneumothorax with Zero Pressure. H. Frey.—p. 441.
"Disinfection of Sputum." Jötten.—p. 447. Reply. Schuster.—p. 448.
*Conference on Ponndorf's Tuberculin Treatment. W. V. Simon.—p. 449.

Suspension Stability of the Erythrocytes in the Tuberculous.—Katz relates experiences with citrated blood which confirm that the speed of sedimentation of the erythrocytes is a sensitive and reliable index of the destruction of tissue that is going on. Hence it is a valuable aid in pulmonary tuberculosis as negative findings exclude an active process, and the modification of positive findings shows the trend up or down. With nontuberculous affections of lungs and pleura the return to normal confirms the absence of a tuberculous process. The reaction depends mainly on the amount of fibrinogen in the blood, and the test should be repeated at ten or fourteen day intervals to estimate the progress of the case. He gages the reaction by the depth of the column of plasma in a set of eight vertical pipets filled with the citrated blood, as he describes. The pipets are 30 cm. long, with a diameter of 2.5 mm. and they are graduated from the top down to the tip, 0 to 200 mm. Four parts of the 3.8 per cent. solution of sodium citrate are mixed with sixteen parts of blood, and set aside in a test tube for four or five hours. Charts are given of a number of cases. Of course the sedimentation reaction is not specific for tuberculosis any more than the temperature or the pulse, but it gives a better idea of the actual condition than the tuberculin test, as the latter may be positive with an inactive focus.

The Ponndorf Method of Tuberculin Treatment.—Ponndorf applies the tuberculin to deep scarifications. He summoned all who had used this method to relate their experiences at a meeting in Weimar, and Simon here gives his impressions of the conference. Hellwig of Stettin declared that he would not care to keep on practicing medicine if he did not have the Ponndorf method. Others were less enthusiastic, but the general impression is favorable; the weight and general condition improve under it and injury from it has not been observed. Simon queries whether the effect is not a kind of protein therapy; this seems plausible, as benefit was reported likewise in exophthalmic goiter, arthritis, psoriasis, erysipelas, epilepsy and arteriosclerosis as well as in the tuberculous. Ponndorf ascribes great importance to the skin itself. This is evidently a factor in Petruschky's percutaneous method of tuberculin treatment.

Mitteil. a. d. Med. Fak. Univ. Fukuoka, Japan

1921, **6**, No. 1. German Edition

Muscular Atrophy with Experimental Joint Lesions. K. Mizoguchi.—p. 1.
*Experimental Production of Aseptic Gallstones. H. Iwanaga.—p. 89.
*Dysenteriform Disease in Children. K. Mita.—p. 111.
*Physiology and Pharmacology of the Heart. T. Sasaki.—p. 129.
*Serologic Research on Plants. H. Kojima.—p. 223.

Experimental Gallstones.—Iwanaga reports that in all his various experiments on rabbits and guinea-pigs he never succeeded in inducing the aseptic production of a cholesterin calculus. However, mechanical or thermal irritation of the mucosa of the gallbladder was followed by production of a concretion resembling the pigment-calcium calculus in man.

Dysenteriform Disease in Children.—Mita found the five ordinary causal agents in 334 cases of dysenteriform disease in children, but in another group of seventy-three he isolated a bacillus which differed from others yet described, and proved virulent for the animals tested.

Physiology and Pharmacology of the Heart.—Sasaki reports his conclusions from analytic study of the heart musculature, especially in regard to tetany of the heart. His research was done on the excised apex of the heart, suspended in Ringer's fluid, the cavity of the stretched apex constantly flushed with the fluid. Among the deductions from these experiences is that fibrillation of the heart is a kind of tetany. It occurs from an abnormal excitation and change in the condition of the heart muscle, just as tetany can be induced.

Serobiology of Plants.—Kojima's comprehensive application of serobiologic methods to differentiate the albumin of different plants showed unexpected diversities and analogies between different species, as he describes.

Hygiea, Stockholm

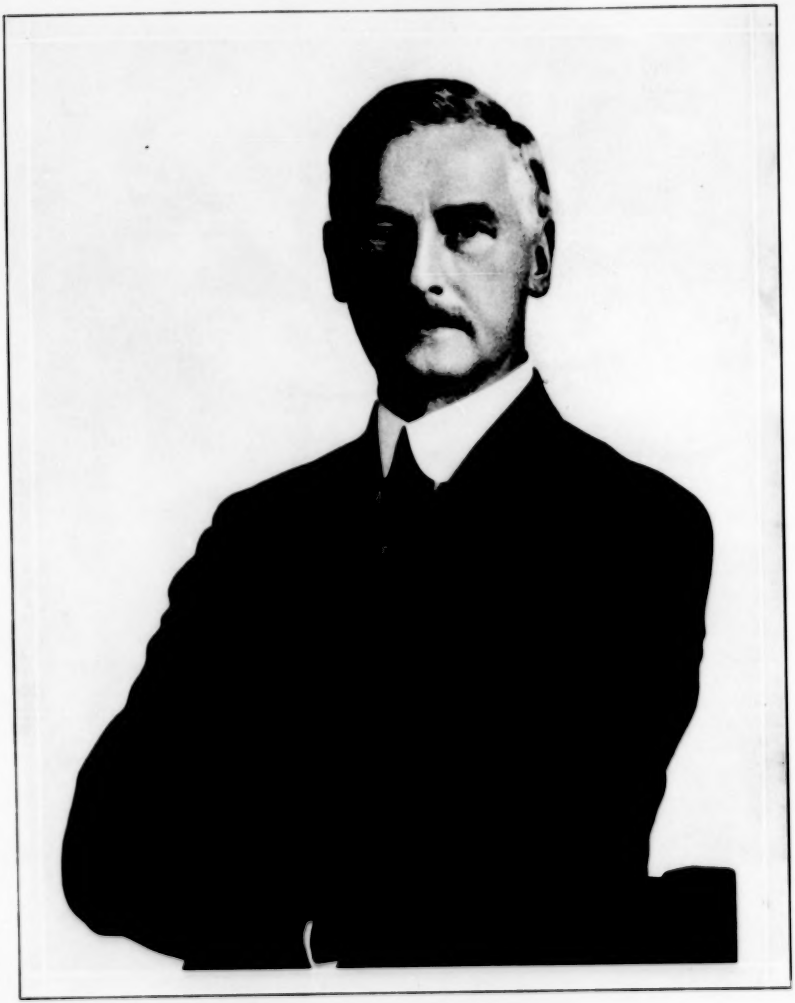
Feb. 15, 1922, **84**, No. 3

Congenital Defect of Both Radius and Ulna. S. Johansson.—p. 81.
Vesalius' Bone in the Foot. Idem.—p. 85.
*Treatment of Acute Hemoptysis. H. Tidström.—p. 92.

Feb. 28, 1922, **84**, No. 4

Graphic Records of Lung Findings. C. O. Segerberg.—p. 116.

Treatment of Hemoptysis.—Tidström excludes one limb from the circulation but has never tied off more than one limb at a time, and he always removes the constricting band at the root of the limb very slowly. He also gives gelatin internally, eight or nine tablespoonfuls daily of a 1 per cent. solution of cooking gelatin. This does no harm in any event, and he is confident that it helped materially to arrest the tendency to hemoptysis in many cases. He long ago abandoned its intravenous use as too dangerous.



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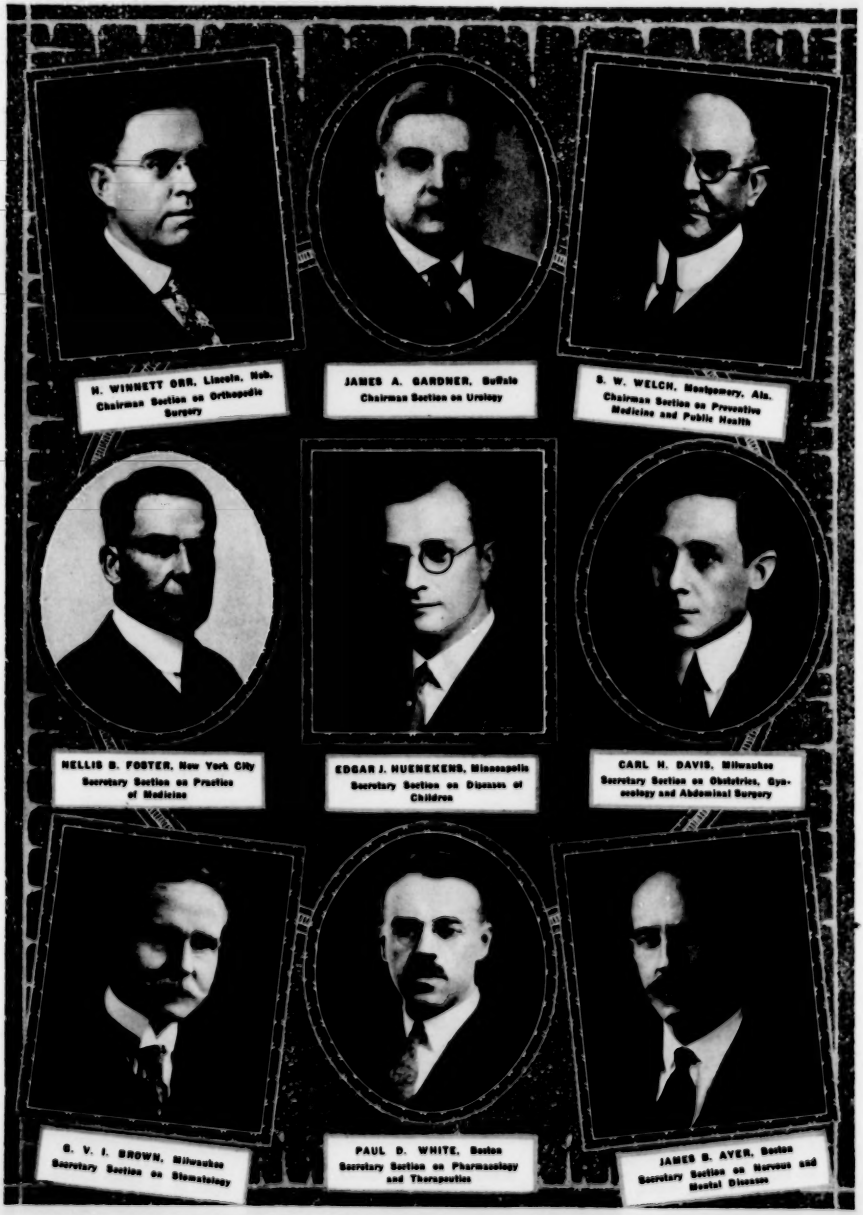
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